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THE MEDICAL JOURNAL OF AUSTRALIA

VOL. I.—10TH YEAR. SYDNEY: SATURDAY, MAY 5, 1923. No. 18.

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An Address.[1]

BY D. D. PATON, M.A., M.B., CH.B. (EDIN.), D.O. (OXON.),
Retiring President of the Western Australian Branch of the British Medical Association.

DR. WOODS and I were appointed by the Council to represent the Branch at the Annual General Meeting of the British Medical Association in Glasgow last July. Entrance to the meeting of the Representative Body as an active member is very strictly controlled and, unfortunately, the postal strike in Austria prevented me receiving my agenda papers and cards of admission in time to attend. Still, from conversations with the Medical Secretaries in London, I was made fully acquainted with the business transacted, which was mainly the consideration of the hospital policy of the Association. It practically corresponds, with variations in detail, to the policy already adopted by the Branch and the main controversy centres round the establishment and use of the so-called staff funds; but it is noteworthy that words implying payment of the medical staff for all other than indigent patients were retained in the Central Council motions, against all amendments to modify them. The policy as yet lays no obligation on the members to accept it, in the sense that its non-acceptance involves no penalties, it being more of the nature of a propaganda programme which it is hoped the medical profession and the public at large will be educated up to accept, seeing that the days of the voluntary hospital as known in the past are numbered.

It is further evident that the part played in politics by the Association is becoming more systematic and now its official approval or otherwise is given to medical candidates, carrying with its support the benefits of the Association's organizations and influence in the areas concerned.

Now that the British Labour Party has produced a hospital policy of its own, it is felt it is incumbent on the Association, if it believes in its adopted scheme being more beneficial to the community, to begin its political work at once. That the medical profession in unanimity can exercise an appreciable influence in the community and that it is beginning to be conscious of the important rôle it plays, was shown in the recent municipal elections in the Willesden District, where a dispute arose with the Urban District Council over what seemed to be an attempt to establish "a general medical service, including nearly everything except domiciliary attendance for every mother and child in the district, on payment of an annual registration fee of two shillings and sixpence." The local Division entered the

[1] Delivered at the Annual Meeting of the Western Australian Branch of the British Medical Association on March 18, 1923, after Dr. Paton had read the Annual Report of the Council.

election lists and two out of three medical candidates were returned at the top of the polls, the party as a whole gaining ten seats. Now the Willesden Division Medical Advisory Committee is cooperating with the Town Council Education Committee whenever expert advice on medical matters may be advantageous to the latter.

In a word, at home as well as here, the medical profession, partly as the result of the inter-class competition in these days of financial stringency, is showing that it is an indispensible part of the body politic and can be trusted to fight for the reward of its work as skilled scientific workers against threatened impositions on its good nature, although continuing to uphold the old-established ideals and principles of the profession, that its services must be available to all sections of the community, but on such lines as increase rather than depreciate the goodwill of those who give and the self-respect of those who receive, whether these appear as a higher personal ethic or an enlightened class consciousness. And the centre for organization is undoubtedly the British Medical Association with its prestige of past services. It has proved itself possessed of sound judgement in matters of medical policy hitherto and I believe by grouping round it and guiding such centres of medical activity outside of the public health services as may be created to meet the demand of the times for preventive medicine and more elaborate diagnosis and treatment, it will make itself, not a competitor, but a valuable ally of the public health administrator, in shaping and in carrying out the developing medical policy of this growing State.

In conclusion, I wish to thank the Council for the leave of absence it granted me last year on some urgency of private affairs and for the support it has given the chair throughout the year. Particularly would I thank the Vice-President, Dr. McWhae, for his ungrudging assumption of the duties of President during my absence, and the Honorary Secretary, for his untiring energy in securing the prompt transaction of business.

ON SUGGESTION, WITH EXAMPLES TAKEN FROM MENTAL HOSPITAL PRACTICE.[1]

BY JOHN BOSTOCK, M.B., B.S. (LONDON), D.P.M.,
Assistant Medical Officer, Claremont Hospital for the Insane, Western Australia.

WERE I to be asked my reasons for addressing you on the subject of suggestion this evening, I would answer that a good wine needs no bush. It will, however, be necessary to qualify the statement by referring to those mixed vintages which have from time to time been advertised as the original article. There have been, among many others, the Pythonism of the Greeks, Shamanism and Magnetism.(1) Later Mesmer, in the eighteenth century, gathered together a veritable clinic, in which he healed by a magnetic fluid. Whilst Mesmer claimed magnetism, the contemporaneous school of Barbin, known as Spiritualists, referred the cures to "faith healing."

About the middle of the last century, hypnotism held the field. This has persisted and is still used by various methods in all countries. Of late years a further school has sprung up, discarding the hypnotic state and using suggestion in the waking state. A variety of this pins its faith to what is termed auto-suggestion. Another uses the hypnoidal state, which is said to be the primitive rest state. Normally it occurs in waking or going to sleep. It is significant that one of the very latest schools of thought—the Freudian—has cast suggestion to the winds.(2) In the hands of a skilful operator it is claimed that direct suggestion does not occur. It is, however, possible that this statement in itself is a brilliant example of that which it professes to ignore, if only in suggesting to the patient the Sphinx-like impartiality of his medical adviser and his absolute mastery of troublesome intra-psychic complexes. But it is still more curious to find that another well-known psycho-therapeutic school,(3) the persuasionist of Dejerine makes the same stipulation as the Freudian, in that the skilled operator uses no suggestion.

It would seem that the evil repute of hypnotism and mesmerism still dog the subject of this essay and in their effort to be clear of the taint the psychological mechanism of over-compensation is exhibited by its antagonists. It is more than likely that no therapeutic measure whatever is free from suggestion to a greater or less extent. Indeed, it is the hardest thing in the world to evade it.

It will be my endeavour in this paper to place some of the facts of suggestion before you so that we may strike a balance as to its importance, usefulness and place in treatment.

Suggestion in Ordinary Life.

MacDougall(4) calls suggestion: "A process of communication resulting in the acceptance with conviction of the communicated proposition in the absence of logically adequate grounds for its acceptance. The measure of the suggestibility of any subject is therefore the readiness with which he accepts propositions." He calls it and I consider correctly a general innate tendency, comparable to the great primary instincts. It is probable that it is one of the most ancient means of communication, as spoken language is not necessarily required. It is more than conceivable that it was used shortly after the first amœboid organism of the newly-formed world had developed its first sensory appendages. From thence onwards it has persisted and civilized man still uses this method to an extent undreamt of by most of us. Logic plays but a part even in the learned professions. Let us take examples of this tendency in common thought. I may quote my own belief in the future of Australia in general and Western Australia in particular. I am absolutely convinced that Sir J. Mitchell is right when he refers to the great destiny of this great land. Yet, when I analyse my reasons, they consist of suggestions from books, paper and people, some compli-

[1] Read at the Annual Meeting of the Western Australian Branch of the British Medical Association on March 18, 1923.

mentary, some the reverse, and my personal experience (from which alone I could draw logical conclusions) is confined to the sandy belt of a few miles round Perth, a piece of land which by itself would certainly have no future. Or, again, I might refer to the last meeting of the Western Australian Branch which I attended. I was informed that Scorpius was a certainty for the Cup. Reading the papers, I learned that some of the profession were owners. This suggested good inside information; so when Scorpius was beaten, I was both astonished and disappointed. Logically this should not have been the case. I have neither seen Scorpius, the racecourse, nor the pedigree of a single horse in the State. Or I might treat my audience to a dissertation on international politics. "We are worthy descendants of the immortal Drake, vanquishers of the Armada, victors of Trafalgar. Every British subject is born with a love for the sea in his being." I do not doubt that you would begin, if it were skilfully done, to think after some minutes there was something in it. Although you personally were seasick upon every occasion, you would subscribe to the "sea dog" destiny of Britain. This form of suggestion is used extensively by all reformers, politicians and others.

It is only necessary to review the millions spent in advertisement, the existence of fashions, whether feminine or masculine, the waves of feeling which occurred during the recent war, the literature of an election, or the herd instincts, to begin to realize the enormous part taken by suggestion, not only in the individual, but in the race.

It is interesting to note, too, that in scientific business the task idea, which is suggesting to the workers the exact amount of work they can do, has been adopted.[5] This is considered one of the most essential innovations in the new scientific management of labour.

Under this connexion I emphasize the increasing rôle of psychology in business. It has been found that by using psychological data, the work of the world may be highly augmented. Before many years elapse all large corporations will be employing their own psychologists to guide them to greater output.

As another homely example of suggestion, let us take that phenomenon known as flattery. If you analyse the mechanism, you will find that it is the implanting of a proposition without logically adequate grounds in the mind of one's victim, be it one's friend, ageing relative or client. In all cases we wish them to believe that they are more handsome, more kindly or more intelligent than they are. That this method succeeds so often is but another example of the universal suggestability of the human race.

Its Application in Medicine.

I have preferred to accept McDougall's definition and view without comment. It is still suggestion and falls under the definition and is actually part of the same process, whether it be suggestion from without — hetero-suggestion — or suggestion from within—auto-suggestion. To analyse suggestion into two processes—acceptation of the idea and translation into action by an ideo-reflex—is interesting imagery, but is not essential. To attribute it entirely to split in consciousness does not seem helpful, if only for the reason that it occurs in identical circumstances, if with differing intensities, in both the normal and the abnormal mind, in the waking state and that of somnambulism and hypnosis.

I like to think of suggestion as one of the doctor's best tried, most trusted, oldest, most ubiquitous and retiring of kind helpers. It helps consistently the surgeon's lancet as well as the physician's phial. The optimistic surgeon, who promises recovery after forcible removal of an appendix, owes not a little to the effect of his cheery words on a susceptible patient. Likewise, many of his colleagues's nostrums would have but little effect without the verbal pronouncement that his subject will feel better afterwards.

This factor enables us to hazard a guess as to why there is such difference in the results of different methods and men. In not a few of them will be found that the most successful are those who have taken into account the question of the suggestibility of the patient.

For this reason alone it is worth while fixing the limits of this innate tendency. Another is that it enables us to analyse more correctly how much is due to the drug and how much to that friend who persists in helping and so muddling us—suggestion. The following amusing quotation from Baudoin[6] is a case in point:

> An asthmatic on a holiday journey was awakened in his hotel by a violent paroxysm of the disease. Greatly distressed for breath, he got out of bed and hunted for the matches. He had a craving for fresh air, but could not find the window. "Confound these third-rate hotels, where one gropes vainly in the dark!" He was suffocating and he clamoured for air. Feeling about, he at length found a pane of glass. "Damn it all, where is the window bolt?" "Never mind, this will do!" and he broke the pane. The fragments fell to the floor. Then he could breathe; again and again he filled his chest with the fresh air. The throbbing at his temples passed and he got back to bed. Saved! Next morning one of the items in his bill was: "Broken clock case, francs 4.35."

As we run through pages of the older volumes in our library we find a wealth of remedies, a myriad lines of treatment, which have had their vogue and have long since sunk into oblivion. We may, if we wish to criticize, say that most of these were not efficacious, but it is more likely that they had a very large amount of success. Otherwise we would not find such accurate observers, as many of the older physicians undoubtedly were, lauding their praises. They served their purpose, in spite of their undoubted inadequacy. The ingredient common to all is suggestion. The patient expected to be, was told that he would be and was thereby cured. I am quoting a few of the older physicians, though I doubt not in your own experience, even at the present time, you will have their equal.

The following is from "Paulus Æginata,"[7] on the loss of memory and of reason (Volume I., page 372):

> That the loss of memory and of reason springs from cold we readily ascertain. But whether it is accompanied with humidity or dryness, we judge of from the discharges.

the habit and temperament of the patient, his mode of life, the season and the country.

The Cure.

If the temperament be cold, we must warm; but if be accompanied with humidity, we must also dry, but if with dryness, we must at the same time moisten and warm. In like manner, when the temperament is warm, we must cool; but if dryness prevail, we must likewise moisten; or if humidity, we must both cool and dry.

Where we find a sanguineous humour prevailing, we must bleed or use acrid clysters, then give hiera and use masticatories. Anoint the head, by mixing with oil things of a cooling and desiccative nature; we mean roses, myrtles, lentisk and the like; and we must attend to the general system. But if it proceed from an overheat and fatigue, we must apply to the head the embrocation of vinegar and rose oil and otherwise use a cooling and moistening regimen in all respects and with regard to food and drink.

In Hecker's "Epidemics of the Middle Ages"[8] (page 135) there is the following:

Nathaniel Pearce, who resided nine years in Abyssinia, describes a malady known as the *tigreter*. When it is the real thing the relatives club together to defray the expense of curing it. The first remedy is to procure a learned doctor to read the Gospel of St. John and drench the patient with cold water daily for the space of seven days—an application which often proves fatal. The most effective cure, though far more expensive, is to hire a band of trumpeters, drummers and fifers and buy a quantity of liquor. Then there was a ceremony in which the band played and the patient, who had been heretofore in a condition of melancholic stupor, taking no notice of her relatives, speaking unintelligibly, wasted and generally in a very bad way, after two minutes of the music, began to move soon afterwards her head and breast and in less than a quarter of an hour she sat upon her couch. A little later she began to dance. The next day the ceremony was repeated at the market place. After a bout of frenzied dancing, she began to strip herself of her ornaments one by one. Shortly afterwards a young man came up, firing a matchlock over her body and striking her with the broad side of his large knife and asking her name, to which she answered in her proper senses.

Pearce later gives an account of how his wife was affected by the same disease. He naïvely states that, thinking it might be due to the feminine love of grandeur, rich dresses which accompany the cure, he struck her when no one was looking, only to find that her condition was made worse. She appeared to have had a definite hysterical attack.

A reference to this very interesting book would not be complete without a passing reference to the various dancing manias, plague and so forth.

As a further example of treatment which could only have had as its vital principle that of suggestion, I may quote from "Hippocrates"[9] (Sydenham Society's translation, Volume I., page 205):

One ought to be particularly guarded during the greatest changes of the seasons and neither willingly give medicines nor apply the cautery to the belly nor made incisions there until ten or more days are past. Now the greatest and most dangerous are the two solstices and especially the summer and also the two equinoxes, but especially of the Dogstar, then of Arcturus and then the setting of the Pleides; for diseases are especially apt to prove critical in those days and some prove fatal, some pass off and all others change to another form and another constitution. So it is with regard to them.

These examples might be multiplied indefinitely. It is significant that in another passage he refers in his aphorisms:

Those diseases which medicines do not cure, iron (the knife) cures, those which iron cannot cure, fire cures; and those which fire cannot cure, are to be reckoned wholly incurable.

This attitude was firmly held until very recent times. The method of suggestion was powerfully and freely used, doubtless, be it added, with excellent results, but so fully were the minds of the experimenters filled with the importance of their potions that they missed an essential ingredient, which is suggestion.

The Factors Concerned in Suggestion.

I have, I trust, made it clear that suggestion is a natural tendency of great antiquity, which still persists to an extent greater than is generally considered the case. I have endeavoured briefly to sketch its important relationship to medicine. It remains to attempt to outline the factors which are concerned in its presence. A good example is that which takes place during a crowded meeting, when a speaker holds a spell-bound audience in an atmosphere described as "electric." They are convinced that his policy is "the" policy. It does not seem that his opponent's reasoning has a particle of truth in it, yet a trained observer, who was not suggestible, might detect many flaws in the speaker's own argument. The audience is in fact convinced of a proposition on illogical grounds. It will be found that this phenomenon depends on:

(1) Deficiency of knowledge or convictions relating to the topic in regard to which the suggestion is made and imperfect organization of knowledge.

These factors are well admitted in common phraseology. We refer to the gullibility of the man in the street, who is said to follow passing opinion "like a sheep." They explain the undoubted suggestibility which occurs in certain pathological conditions, such as general paralysis of the insane or Korsakow's syndrome. In both there is found a paucity of ideas, an inadequacy of the "convictional" system and a defective arrangement of their knowledge. It may account for the increased suggestibility of children.[10]

(2) The impressive character of the source from which the suggested proposition is communicated. This has been aptly termed prestige suggestion. It explains why, in medicine, as in other professions, nothing succeeds like success. The forceful and impressive physician should have, other things being equal, better results than his diffident colleague.

(3) Peculiarities of the character and native disposition of the subject. This is but another way of saying that no two of us are alike and that there is a wide variation in the amount of inherent suggestibility. This is in all respects comparable to that temperamental variation which is so important in the study of psychiatry.

(4) Abnormal states of the brain, of which the relative dissociation obtaining in hysteria, hypnosis, normal sleep (hypnoidal state), fatigue are the most important.

In the example of the crowd, this abnormal state is shown in the wrapt attention of the audience. They are "all ears"; they are unmindful of little discomforts, the hard seats, the fœtid atmosphere, the time which is getting late. They show a fixation of the attention. I may remark in passing

that this abnormal condition is just that essential to hypnosis and is but one step removed from sleep. It suggests that unity in the mechanism of suggestion which I have endeavoured to point out as existing—it matters not if be hypnotism, somnambulism or the waking state. In recent work the psychology of the crowd has been emphasized and reference has been made to its guiding factors as the herd instincts. These comprise suggestion, imitation and sympathy. I have referred previously to the war as an example of what we might call an hysteria producer. In it we saw these factors at work, whole groups of nations, imbued with the idea of being in the right, working for their mutual destruction. I need hardly describe the individual factors in this form of mass behaviour, but it is important to realize that their inter-play strengthens enormously their force.

To return to the example of the crowd, one may enter it cool and collected, but if there has been a large amount of feeling displayed, it is more than likely that one will leave it with heightened emotion, thanks to the contagiousness of sympathy, imitation and suggestion. This phenomenon has a great bearing on therapy. It gives a reason, on the one hand, why clinics of all sorts are on the increase and are a success. On the other, it reminds the individual practitioner of an important line in his treatment by suggestion. It is as well when the details of his case are being told to the patient, even at the risk of appearing tedious, to explain the symptoms, the line of treatment and so on to an audience, even if be only a friend who has little to do with him.

We will now notice an allied phenomenon (or is it the identical one?) known as that of "association of ideas."[11] Experiments with marked cards have shown why one particular idea comes into consciousness rather than another.

It has been found that the reasons for thinking of a particular idea are:

(*i.*) The recency of their previous connexions.

(*ii.*) The relative vividness of the previously connected ideas and the degree of attention aroused by them.

(*iii.*) Their spatial relationships.

(*iv.*) Their frequency.

It will be observed that with one exception these will compare with the factors in the analysis of suggestibility. We considered a meeting and the emotion of an individual of the crowd. The effect wears off; it depends on recency. It depends, too, on the vividness and the brilliance of the speaker. It will depend on the previous experiences of the individual; his temporo-spatial relationships.

For the fourth factor of frequency we have no parallel condition. This I consider an omission, as it is vital in suggestion, especially as regards treatment. It is the idea generally prevalent that suggestion is the quick way of cure; hence it is not thorough. The suggestionist is comparable to Ali Baba, who says: "Open Sesame!" and the door opens at once. The patient should be cured at a sitting or at most in a week or two!

I see no reason why the suggestionist should not rather adopt with benefit the teaching of Freud on this score. It is reasonable to suppose that a mental condition which takes years to materialize, will take a considerable time to undergo alteration by suggestion. He should be prepared to give his treatment for a very long period before admitting failure. His suggestions will in time make an impression, much as dripping water will bore its way into rock.

I have endeavoured to outline some of the principles which will guide us in using suggestion, but I have so far said nothing as to results we may hope to achieve. A very ambitious list of these has been formulated by the exponents of suggestion in all states (hypnotism, hypnotic, somnambulic and waking).

Lest we be too sceptical, I would remind you of the known effects of the psychic area on the sensori-motor neurones and the vegetative system. The emotion of fright may increase the pulse and breathing rate, dilate the pupils, cause tremor, micturition and defæcation and alter the glandular secretions (such as sweat and salivation) and innervate the pilo-motor fibres. A telegram of bad news may cause syncope or in a pregnant woman a miscarriage. It would appear that each psychological sensori-motor level can be, as it were, unlocked by the level above. It does not seem too much to hope that some day the higher psychic level may to some extent voluntarily control even the vegetative autonomic system. It is certainly not inconceivable that the key used may be suggestion.

Of the kinds of suggestion which may be employed, they may be roughly classified:

(1) In the waking state. (*a*) Indirect and general suggestion. This is the kind practised by all practitioners. It is usually unintentional. Under this heading may be included vehicular suggestion, such as drugs, hydro-therapy, electricity and the like. (*b*) Direct suggestion. The patient is told either that he is improving or that he will get well.

(2) In special states, such as the hypnotic, somnambulist, sleep, hypnoidal or allied conditions.

Clinical Histories.

All the patients I wish to show have been treated by suggestion in the waking state:

CASE I.—E.M.T., single, aged forty-four years, was admitted in 1919. She was an epileptic with numerous attacks of *petit mal* type. Throughout her stay she has had a persecutory and hypochondriacal system of ideas which has never ceased to make her a nuisance to herself and to her neighbours. She had never done any work in the wards.

On January 8, 1923, she was promised a nerve tonic which it was suggested would only have its best result if she kept her mind occupied by helping the nurses. The tonic consisted of 0.6 gramme (ten grains) of bromide of potash twice daily. Since then she has worked well, has been much brighter and has had no more fits. In order to see if this immunity is due to the bromide, I have instead put her on compound tincture of cardamons twice daily with a similar result.

CASE II.—F.M.T., married, aged thirty-three years, was admitted in 1917. She is said to have had chorea in childhood. On admission she had constant jerky movements

of her hands, arms, head, shoulders, with screwing up of one side of her face. Her mental condition showed confusion. She improved considerably until May of last year, though she never lost her tremor. She then began to get worse and her gait was so unsteady that it was thought necessary to stop her working.

On January 10, 1923, suggestion treatment was commenced. She was told that she could improve and would gradually get steadier. Each morning she carried out simple exercises before the medical officer, such as walking erect, stooping and putting her hands out in front of her. Her condition has improved considerably; she has not fallen for some weeks; she can sew a little, can spread a bed and generally make herself useful. She says herself that she feels much better.

CASE III.—S.M.C., aged fifty-eight years, single, was admitted in November, 1922. Mentally this patient shows a mild persecutory system of delusions, which included a conviction that she had not slept for two and a half years. She explained that this was due to the fact that a man was paying the police to drive past the place in a motor-car to prevent her sleeping.

On February 8, 1922, she was told that a special dose of medicine (infusion of gentian) would be given her at nine o'clock in the evening by the Matron personally and that she would sleep for a half of an hour. The suggestion bore fruit the same night. Subsequently this has extended to seven hours nightly. This patient is, as a matter of fact, a very good sleeper. It is interesting to note that she says she feels in better health because of her imaginary betterment.

CASE IV.—M.O., aged forty-five years, was admitted in November, 1922. She had chronic hallucinatory insanity with an alcoholic history. On her arrival at the Hospital she was troubled by a delusion that she would be put into boiling oil. This idea had been retained and during December, 1922, it had become very insistent. She believed that something dreadful was going to happen to everybody. Her emotional tone was consistent with this and gave rise to great agitation.

Towards the end of the month it was suggested that the dreadful fate which was to overtake us, would be a good thing, as it would save us a lot of worry or, alternately, that she may have been mistaken. The rationale of this suggestion was that if a speedy end is a desideratum, it is obviously no use becoming excited about it. The suggestion has been repeated daily. She has since gradually become more contented and the delusion, though still present, is not nearly so insistent. Latterly she has commenced helping the nurses in the ward.

CASE V.—A.L., aged twenty-four years, was admitted in 1920. She suffers from feeble-mindedness and lack of control, the sequelæ of an infantile hemiplegia. She showed alternating periods of restlessness and depression until June, 1922, when she became industrious and much quieter. This phase lasted until February, 1923, when she became maniacal and had to be put in restraint. She attributed her condition to hearing spirits, the voices of the dead which spoke to her through a hole in her head. By this she referred to a depression on the scalp, due to the imperfect closure of her posterior fontanelle.

It was then suggested that an operation and treatment might enable this to close up internally. She was given some days to think it over and was told that she must be absolutely certain in her own mind as to the result. Finally she became very enthusiastic on the scheme.

On March 7, 1923, she was taken into the operating theatre, had her hair cut over the fontanelle, alcohol and ethyl chloride were applied and the area pricked with a needle. A dressing of *unguentum hydrargyrum* and a tight bandage completed the operation.

The voices disappeared immediately and, though she is still talkative and restless, she is well enough to be about the ward and has improved considerably in her general behaviour.

CASE VI.—A.C., aged fifty-three years, single, was admitted in November, 1916. She had been a nurse during the war and had been invalided with melancholia. She had a delusion that she had a contagious disease. Her condition became steadily worse; she showed extreme ataxia and spent all her day in a stuporose state, taking no notice of her surroundings. She had astasia abasia.

In November, 1922, it was suggested that she could dress herself and would be able to walk with increasing ease. With the exception of one slight relapse she has steadily improved until she can walk well without assistance. She reads the paper, helps in the ward, seems to be correctly orientated and there are hopes of her being discharged in the near future.

CASE VII.—L.E.B., aged forty-three years, married, was admitted in August, 1922. She suffered on her arrival with a mixed system of grandiose and persecutory hallucinations and delusions. She soon became stuporose, a condition from which she only emerged at meal times, when she would rush to the table and bolt all the food she could lay her hands upon.

On January 5, 1923, by means of pressure on her supra-orbital nerve, she was induced to sit up and it was suggested that she could take her food normally. Later in the day this occurred for the first time. Her improvement was remarkably rapid. She became lucid and gave an excellent description of an obsession of which she was fully cognisant and for which she had insight. She said that it was necessary for her to stretch her mouth with food, which she must spit out before she could swallow any.

A month later she relapsed and it was noted that she showed complete negativism. If told to look to the right, she turned her eyes to the left. She has not, however, reached her former state and seems to be improving again.

Prognosis.

In conclusion, I would remark I am aware that in the series of cases which I have described it is too soon to hazard a prognosis, but I think the results are sufficiently encouraging to warrant a further trial of suggestion.

Acknowledgements.

I must add that my thanks are due to the efficient cooperation of the nursing staff. This I consider peculiarly essential, as the patient comes for a far longer time under the suggestion of the nurse than under that of the doctor. It is an argument for the high place which should be assigned to the mental nurse in modern psychiatry.

I am indebted to Dr. J. T. Anderson, Inspector-General of the Insane for Western Australia, for permission to publish this series of cases.

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NOTES ON THE ALLEN TREATMENT IN A CASE OF DIABETES MELLITUS, WITH EVIDENCE OF AN HEREDITARY FACTOR IN THE INCIDENCE OF DIABETES.

BY THE LATE IVAN E. ASHBY, M.D.

COMPILED BY T. BRAILSFORD ROBERTSON, PH.D., D.SC., AND C. T. C. DE CRESPIGNY, M.D., B.S., M.R.C.P., ADELAIDE, FROM POSTHUMOUS NOTES.

General Considerations.

DURING the past five years I have had rather exceptional opportunities for studying this disease and I have felt it my duty to record a brief summary of my conclusions in case they may possibly be of some use to others. The spirit has been willing, but the flesh has been rather weak, which latter fact must serve as my excuse for simply giving my conclusions in brief note form, leaving out all the experiences, arguments and so on which have led up to them.

My plan is to give: (*i.*) A list of the various opportunities I have had of studying diabetes. I do this to enable the reader to judge just how much value to attach to the several statements which I make. (*ii.*) To outline my conception of the disease and its treatment, emphasizing only the main principles and their bearing on the management of the case. This will resolve itself into simply giving Dr. Allen's views as I understood them when he so kindly explained and demonstrated the whole business to me in 1918. (*iii.*) To add any practical points which I have found of use during treatment.

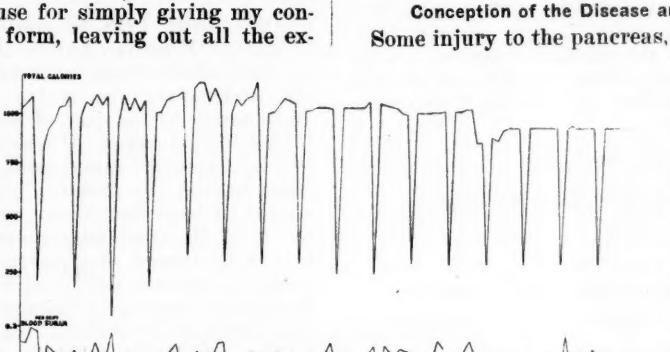

FIGURE I.

Chart of Calorific Intake and Blood Sugar Levels in the Case of Dr. I. E. Ashby. Determinations daily from January 23 to May 16, 1920, with the exception of April 12. Note the slow rise of minimum levels to April 6 and the fall of these minima consequent upon a lowering of the calorific intake. The blood for sugar estimations was obtained each morning before breakfast. The urine throughout this period was sugar-free, excepting on April 4, when a trace of sugar was present in the urine.

Experience.

About the middle of 1915, which was a vacationless fifth year in which about nine months' work had to be done in seven months, I discovered a glycosuria of over 9%. I was then aged twenty-two years. Since that date I have tried practically every method of treatment, whether reasonable or otherwise, that has ever been suggested. I have also tried to determine the effects of various influences, such as overwork, mental strain, weather (thunderstorms *et cetera*), rest, violent exercise and so forth. While resident at the Adelaide Children's Hospital I was enabled to study two cases of diabetes in children over considerable periods of time.

Every member of the healing professions with whom I have come in contact, from the youngest probationer nurse to the President of the South Australian Branch of the British Medical Association, has given me of their experiences and most kindly helped me in every way by advice, treatment, discussions and calling my attention to articles, books and so forth. I should like to take this opportunity of thanking everybody. The list of those who have taken no end of trouble to help me is so long that I shall not attempt to mention names.

While in America during 1918 I was enabled to discuss the subject with several of the authorities on diabetes, including Drs. Frederick M. Allen, Llewellyn F. Barker and others and to undergo treatment by Drs. Barker and Allen. Dr. Allen was most kind in explaining his views and showing me his slides demonstrating the changes in the pancreas as the disease progresses. Those showing the effect of treatment were most convincing.

Conception of the Disease and Its Treatment.

Some injury to the pancreas, which may be inflammatory, nervous or toxic (the cause of the original injury is of secondary importance), results in a lowered capacity for its work. This involves a "strain" on the islets, which in turn leads to changes in the islets, whereby the cells become swollen and vacuolated and further loss of function results. So far the changes are not permanent and if the strain be removed by giving a diet so low that there is no hyperglycæmia or acetonæmia, the islets will recover completely. This Allen terms the functional stage. If it is untreated or insufficiently treated, the hyperglycæmia will continue and consequently the strain on the islets will continue and their function will continue to diminish and thus further increase the strain. In other words, a vicious circle is established; the higher the strain the less the functional capacity, which in turn increases the strain still further. This continues until permanent or organic changes appear. The islets become fewer and smaller, seeming simply to degenerate and melt away; thus arises further strain and reduction in the capacity for work. There are thus two factors to consider with regard to the islets: (*i.*) the functional element, which is curable; (*ii.*) the secondary organic changes, which are permanent.[1]

[1] Note by Professor T. Brailsford Robertson and Dr. C. T. C. de Crespigny.—Recently published investigations by Allen show that hypertrophy of a pancreas remnant may prevent or delay diabetes in young and growing animals from which the pancreas has been partially removed by operation. The hypertrophy observed in these cases, however, does not exceed that which may occasionally occur in adults (*American Journal of Physiology*, 1921, Volume LIV., page 439).

The severity of a given case is, therefore, represented by the degree to which the permanent factor is present. As long as the strain continues, the permanent degeneration will increase and, owing to the vicious circle set up, the degeneration will increase more quickly as time goes on.

The conditions which constitute the strain are (*a*) hyperglycæmia and (*b*) acetonæmia. The indicated treatment, therefore, is that which is recommended by Allen, namely, fasting until there is a normal blood sugar, followed by a diet which will maintain normal blood sugar and absence of acetonæmia. This procedure will result in a cessation of the downward progress of the case, a recovery from the functional factor, leaving the tolerance for carbohydrates lowered only to the extent that the permanent degeneration has taken place.

From this it follows that the earlier a patient is seen, while the diabetes is still mainly functional, and the nearer the treatment approaches the ideal standard of normal blood sugar and absence of acetonæmia, the nearer will the final result approach a complete cure.

RECORDS OF DR. IVAN ASHBY'S CONDITION.

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The record of the case which here follows, comprising the material which Dr. Ashby would doubtless have wished to include under his third caption, is compiled from the data which were accumulated during the progress of the case under the direction of Dr. Ashby himself. The actual enumerations of calories and estimations of blood sugar and other constituents of blood or urine were carried out by his mother, Mrs. Edwin Ashby, and certain observations to which her close and constant scrutiny of the case necessarily gave rise are included in the record. Although not specifically mentioned by Dr. Ashby in his notes, these are for the most part foreshadowed in his statement above under the caption of "Experience." The completeness and exactitude of this record renders it an exceptionally valuable picture of the fluctuations of glycæmia which accompany variations of the dietary in a diabetic.

In the third year of his medical course Ivan Ashby had an attack of quinsy and later had both tonsils removed. These were stated to have been very septic. Towards the end of the fifth year of his medical course he was called upon with other men of his year to render assistance in the Adelaide Hospital owing to the shortage of medical officers created by the war. After three heavy weeks of work, involving much night as well as day work, he felt ill and returned home. He discovered sugar in his urine two weeks later (9%), being then twenty-two years of age (August, 1915).

He placed himself under the care of a physician and was restricted to a carbo-hydrate free diet. In September, 1915, he received his M.B., B.S. and a few weeks later took the position of Medical Superintendent to the Adelaide Children's Hospital. The work involved was very heavy, owing to the shortage of doctors and at the end of 1916 he returned home to endeavour to treat himself by the Allen system. At that time he was passing urine containing 6% of sugar. Four days of starvation rendered his urine sugar-free, but he was unable to keep it so upon any diet which permitted continuation of his work. He returned to the Children's Hospital and in November, 1917, took his M.D. degree.

Until April, 1918, he continued his work at the Children's Hospital, but in May, 1918, he travelled to the United States with his father, placing himself under the care of Dr. Llewellyn Barker, at Baltimore. At the date of his arrival his urine contained 10% of sugar. His urine was rendered sugar-free by five days' starvation, but could not be kept sugar-free on any dietary. After five weeks he proceeded to Lakewood Camp, where he was examined by Dr. F. M. Allen, who recommended him to return to the Baltimore Hospital and endeavour by starvation to reduce the blood sugar to normal. The blood sugar had not previously been determined and was found to be 0.251%, 0.275%, 0.191%, 0.155%, 0.138%, 0.200%, 0.181%, 0.180%, 0.220% and 0.148% in ten consecutive days, during which the urine was sugar-free and free from acetone bodies.

After a few weeks more of intermittent starvation, his weight reduced to forty-six kilograms (one hundred and one pounds), he started on his return home. During the journey across the American continent and at the height of the epidemic of 1918 his father developed influenza and Dr. Ashby nursed him. At Rochester, Minnesota, they halted while Dr. Ashby visited the Mayo Clinic. Before their arrival at San Francisco Dr. Ashby himself had contracted the influenza, accommodation and medical assistance proving almost impossible to procure, owing to the congested condition of hospitals and panic inspired by the epidemic. He was carried on board the ship a fortnight later and at first appeared to be making a good recovery. Subsequently during the voyage, however, he developed pneumococcal empyema and, while the boat was quarantined in Sydney, fluid was withdrawn from the thorax a number of times. On arrival at Sydney the urine contained 4% of sugar, but this was reduced to a trace within two days by a suitable dietary. The journey to Adelaide was concluded in December, 1918. He was sugar-free on arrival. The thorax was drained, 1.14 litres of fluid being removed a few days after his arrival and shortly afterwards he returned to his home, where he continued treating himself. The wound in his thorax never healed, however, and discharged fluid from time to time until his death.

The treatment was carried out, therefore, under this special disadvantage.

At first in 1919 he had one starvation day per week, later two per week, then three and finally four. His urine was always sugar-free after these days, but it returned, to disappear after the next reduction day.

In November, 1919, he was removed to Parkwynd Hospital, where Dr. Cudmore inserted a subcutaneous graft of human pancreas taken from a young man, victim of an accident. In a few days the wound broke down. A few weeks later a second graft was performed, the pancreas tissue being taken from a child of six years of age who had died as the result of burns. This also broke down and two weeks later, in January, 1920, he returned home.

Under these circumstances the accompanying record of dietary and corresponding blood sugar concentrations was obtained. It is remarkable for the long duration and exactitude of the observations and the faithful picture it gives of the fluctuations of the blood sugar with the calorific intake and the ever-recurring tendency of the blood sugar to rise above the normal level of 0.100%. It is remarkable, also, as showing what degree of control of the glycæmia may be achieved under such untoward circumstances and as a testimony to the value of blood sugar estimations in revealing the true progress of the disease, for throughout the greater part of this record the urine was both sugar-free and acetone-free. It will be observed that, without reduction of the dietary, there was a marked improvement subsequently to the insertion of pancreas grafts, a fact which is of peculiar significance in the light of the recent discoveries of Banting and Best and Macleod.[1]

Blood sugar was determined by Epstein's modification of Benedict's method and the Rothera test was employed for acetone bodies in the urine.

The observations were terminated by Dr. Ashby's death in August, 1920, due to broncho-pneumonia following upon infection with a common "cold" which ran through the household at that time.

Finally we append the genealogy (Figure II.) compiled by Mrs. Ashby, which reveals with exceptional clearness the existence of an hereditary factor predisposing to diabetes. On the father's side and in collateral branches of his father's family there is no record whatever of the occurrence of diabetes, but on the mother's side it will be seen that it has manifested itself in four individuals of the present generation in three different branches of the family and that it has skipped a generation in the manner typical of recessive Mendelian inheritance, two individuals of the same generation as Dr. Ashby's grandmother (herself free from the disease) having succumbed to diabetes.

Reference.

[1] Macleod, J. J. R.: *The British Medical Journal*, November 4, 1922, page 833.

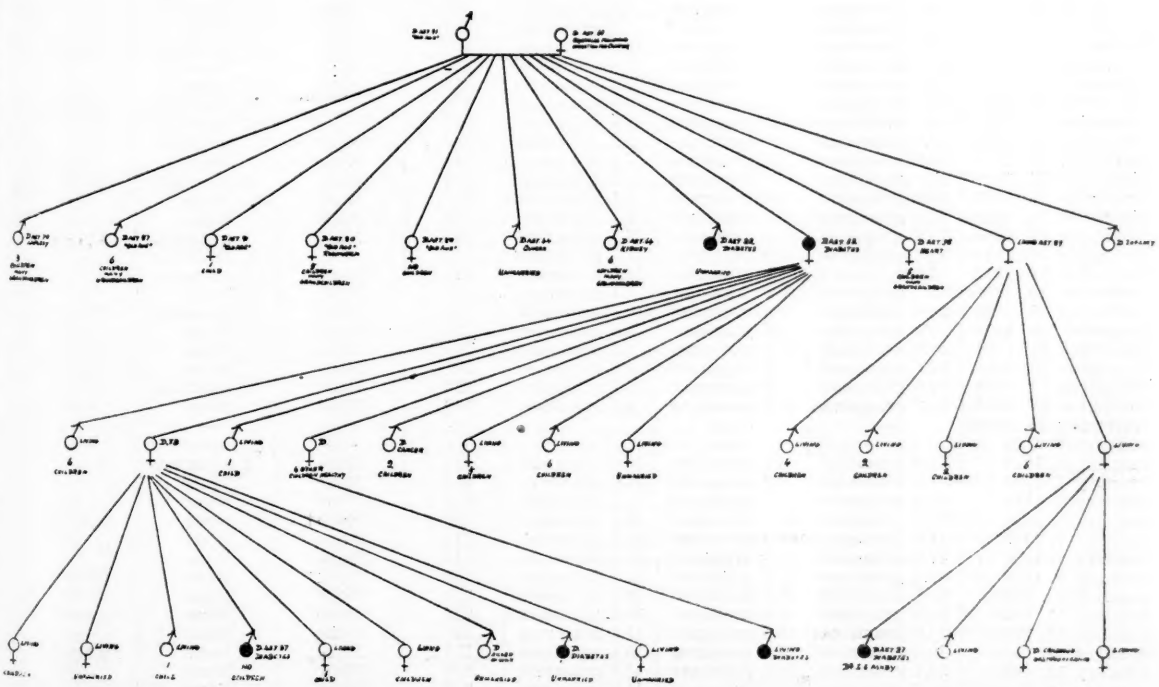

FIGURE II.

Maternal Genealogy of Dr. I. E. Ashby. The diabetics are distinguished by full black circles. Six cases have occurred in two generations. It will be noted that two of these cases occurred in the first generation of descendants and four in the third, the second generation being to date free from the disease. On his father's side there is no record of diabetes.

RECORD OF DIETARY AND BLOOD SUGAR CONCENTRATIONS IN THE CASE OF IVAN ASHBY, 1919-1920.

Date.	Intake of Food.				Acetone in Urine.	Total Sugar in Urine.	Blood Sugar.
	Protein.	Fat.	Carbo-hydrate.	Total Calories.			
October 1, 1919 ..	70.0 grammes	46.0 grammes	18.7 grammes	769	None	8 grammes	—
October 2, 1919 ..	38.1 grammes	20.5 grammes	5.3 grammes	355	None	8 grammes	0.180%
October 3, 1919 ..	31.5 grammes	20.5 grammes	5.3 grammes	331	None	3 grammes	—
October 4, 1919 ..	52.6 grammes	48.0 grammes	15.1 grammes	703	None	None	0.130%
October 5, 1919 ..	71.0 grammes	62.7 grammes	22.0 grammes	936	+++	17 grammes	—
October 6, 1919 ..	34.5 grammes	23.5 grammes	4.2 grammes	366	+	5 grammes	—
October 7, 1919 ..	31.3 grammes	29.3 grammes	5.9 grammes	423	None	None	—
October 8, 1919 ..	77.6 grammes	51.5 grammes	17.0 grammes	842	++	5 grammes	0.150%
October 9, 1919 ..	34.8 grammes	20.5 grammes	5.5 grammes	346	None	3 grammes	—
October 10, 1919 ..	35.8 grammes	20.5 grammes	5.0 grammes	348	None	—	—
October 11, 1919 ..	77.6 grammes	51.0 grammes	8.9 grammes	805	+++	5 grammes	0.124%
October 12, 1919 ..	72.3 grammes	57.0 grammes	14.2 grammes	859	+++	27 grammes	—
October 13, 1919 ..	34.9 grammes	25.4 grammes	2.9 grammes	380	None	8 grammes	—
October 14, 1919 ..	33.9 grammes	30.2 grammes	6.4 grammes	433	None	None	—
October 15, 1919 ..	81.5 grammes	69.0 grammes	12.8 grammes	998	+++	9 grammes	0.166%
October 16, 1919 ..	35.5 grammes	20.5 grammes	5.3 grammes	348	+++	8 grammes	—
October 17, 1919 ..	39.5 grammes	20.5 grammes	5.3 grammes	364	None	None	—
October 18, 1919 ..	68.5 grammes	40.5 grammes	11.8 grammes	686	None	4 grammes	—
October 19, 1919 ..	80.7 grammes	41.3 grammes	16.1 grammes	759	None	7 grammes	—
October 20, 1919 ..	17.6 grammes	29.7 grammes	69.0 grammes	614	None	17 grammes	—
October 21, 1919 ..	36.0 grammes	20.0 grammes	8.6 grammes	358	None	—	—
October 22, 1919 ..	80.0 grammes	57.0 grammes	15.8 grammes	897	+	12 grammes	0.194%
October 23, 1919 ..	41.5 grammes	22.3 grammes	5.3 grammes	388	None	4 grammes	—
October 24, 1919 ..	46.5 grammes	22.3 grammes	6.0 grammes	411	None	—	—
October 25, 1919 ..	82.0 grammes	46.5 grammes	15.3 grammes	808	+++	18 grammes	0.184%
October 26, 1919 ..	62.3 grammes	42.1 grammes	63.3 grammes	881	+++	25 grammes	—
October 27, 1919 ..	36.5 grammes	25.5 grammes	6.1 grammes	400	None	None	0.210%
October 28, 1919 ..	32.5 grammes	25.5 grammes	6.1 grammes	373	None	None	—
October 29, 1919 ..	83.0 grammes	66.0 grammes	19.6 grammes	1,004	+	6 grammes	—
October 30, 1919 ..	42.5 grammes	23.5 grammes	6.0 grammes	405	None	6 grammes	—
October 31, 1919 ..	36.5 grammes	23.5 grammes	5.7 grammes	380	None	1 gramme	—
November 1, 1919.	76.5 grammes	49.5 grammes	11.8 grammes	778	++++	12 grammes	0.144%
November 2, 1919.	65.8 grammes	36.6 grammes	64.3 grammes	849	++++	21 grammes	—
November 3, 1919.	39.0 grammes	23.0 grammes	3.6 grammes	364	None	1 gramme	—
November 4, 1919.	49.0 grammes	17.0 grammes	3.6 grammes	363	None	None	—
November 5, 1919.	90.9 grammes	46.5 grammes	17.2 grammes	851	None	13 grammes	0.155%
November 6, 1919.	37.2 grammes	23.0 grammes	3.6 grammes	370	None	None	—
November 7, 1919.	35.0 grammes	26.0 grammes	3.6 grammes	388	None	None	—
November 8, 1919.	89.0 grammes	37.5 grammes	13.4 grammes	749	+	16 grammes	0.170%
November 9, 1919.	65.8 grammes	55.6 grammes	43.4 grammes	937	++++	27 grammes	—
November 10, 1919	39.0 grammes	23.0 grammes	6.5 grammes	389	None	1 gramme	—
November 11, 1919	39.0 grammes	23.0 grammes	7.1 grammes	391	None	None	—
November 12, 1919	84.8 grammes	45.6 grammes	13.3 grammes	803	None	3 grammes	0.150%
November 13, 1919	33.0 grammes	11.0 grammes	6.1 grammes	255	None	None	—
November 14, 1919	31.5 grammes	11.0 grammes	6.1 grammes	249	None	None	—
November 15, 1919	79.8 grammes	48.0 grammes	17.3 grammes	820	None	3 grammes	0.118%
November 16, 1919	82.1 grammes	48.0 grammes	18.5 grammes	834	+	26 grammes	—
November 17, 1919	36.6 grammes	23.0 grammes	11.1 grammes	378	None	1 gramme	—
November 18, 1919	30.5 grammes	23.0 grammes	7.1 grammes	357	None	None	—
November 19, 1919	85.6 grammes	57.0 grammes	10.1 grammes	896	None	8 grammes	0.155%
November 20, 1919	29.0 grammes	11.0 grammes	3.6 grammes	229	None	None	—
November 21, 1919	34.0 grammes	11.0 grammes	3.6 grammes	249	None	None	—
November 22, 1919	96.5 grammes	37.5 grammes	9.6 grammes	761	None	None	0.132%
November 23, 1919	82.0 grammes	48.0 grammes	15.7 grammes	823	None	2 grammes	—
November 24, 1919	10.3 grammes	14.0 grammes	4.8 grammes	188	None	None	—
November 25, 1919[1]	—	—	—	—	—	—	—
January 2, 1920[1] ..	—	—	—	—	—	—	—
January 3, 1920 ..	20.0 grammes	39.0 grammes	28.5 grammes	545	None	3 grammes	—
January 4, 1920 ..	27.0 grammes	26.0 grammes	29.0 grammes	458	None	Trace	—
January 5, 1920 ..	41.5 grammes	33.5 grammes	45.5 grammes	649	None	None	—
January 6, 1920 ..	40.5 grammes	40.0 grammes	44.3 grammes	699	None	None	0.200%
January 7, 1920 ..	44.5 grammes	39.0 grammes	45.3 grammes	710	None	None	—
January 8, 1920 ..	47.5 grammes	44.0 grammes	48.5 grammes	740	None	None	—
January 9, 1920 ..	53.3 grammes	47.8 grammes	37.5 grammes	793	None	None	0.200%
January 10, 1920..	50.3 grammes	47.0 grammes	39.7 grammes	774	None	None	—
January 11, 1920..	50.3 grammes	46.0 grammes	39.4 grammes	773	None	None	—
January 12, 1920..	13.8 grammes	13.5 grammes	15.3 grammes	238	None	None	—
January 13, 1920..	49.2 grammes	45.0 grammes	39.4 grammes	759	None	None	0.156%
January 14, 1920..	50.7 grammes	54.0 grammes	43.9 grammes	864	None	None	—
January 15, 1920..	48.7 grammes	52.0 grammes	41.9 grammes	828	None	None	—
January 16, 1920..	48.7 grammes	52.0 grammes	42.4 grammes	832	None	None	0.134%

[1] Between November 25, 1919, and January 2, 1920, the pancreatic grafts were performed.

Record of Dietary and Blood Sugar Concentrations in the Case of Ivan Ashby, 1919-1920.—*Continued.*

Date.	Intake of Food.				Acetone in Urine.	Total Sugar in Urine.	Blood Sugar.
	Protein.	Fat.	Carbo-hydrate.	Total Calories.			
January 17, 1920..	49.9 grammes	57.5 grammes	49.6 grammes	915	None	None	—
January 18, 1920..	48.7 grammes	52.0 grammes	47.7 grammes	853	None	None	—
January 19, 1920..	12.8 grammes	12.5 grammes	10.8 grammes	207	None	None	—
January 20, 1920..	47.0 grammes	54.0 grammes	58.9 grammes	916	None	None	—
January 21, 1920..	47.0 grammes	54.0 grammes	57.8 grammes	905	None	None	0.120%
January 22, 1920..	47.0 grammes	54.0 grammes	60.9 grammes	918	None	None	—
January 23, 1920..	48.0 grammes	58.0 grammes	60.3 grammes	955	None	None	0.170%
January 24, 1920..	45.4 grammes	67.0 grammes	60.1 grammes	1,025	None	None	0.170%
January 25, 1920..	48.0 grammes	69.0 grammes	60.3 grammes	1,054	None	2 grammes	0.196%
January 26, 1920..	10.0 grammes	15.0 grammes	8.0 grammes	207	None	None	0.190%
January 27, 1920..	45.0 grammes	52.0 grammes	43.7 grammes	823	None	None	0.080%
January 28, 1920..	47.5 grammes	59.5 grammes	45.4 grammes	907	None	None	0.164%
January 29, 1920..	46.5 grammes	61.5 grammes	51.0 grammes	943	None	None	0.154%
January 30, 1920..	47.0 grammes	69.0 grammes	49.0 grammes	1,005	None	None	0.146%
January 31, 1920..	48.0 grammes	69.0 grammes	48.8 grammes	1,003	None	None	0.146%
February 1, 1920..	47.5 grammes	73.5 grammes	50.9 grammes	1,055	None	None	0.130%
February 2, 1920..	9.8 grammes	12.5 grammes	6.8 grammes	179	None	None	0.156%
February 3, 1920..	47.5 grammes	64.5 grammes	47.7 grammes	961	None	None	0.086%
February 4, 1920..	48.0 grammes	72.0 grammes	47.7 grammes	1,031	None	None	0.146%
February 5, 1920..	48.0 grammes	70.0 grammes	48.5 grammes	1,016	None	None	0.140%
February 6, 1920..	50.5 grammes	75.0 grammes	47.0 grammes	1,067	None	None	0.170%
February 7, 1920..	50.5 grammes	75.0 grammes	34.8 grammes	1,016	None	None	0.140%
February 8, 1920..	48.5 grammes	76.5 grammes	43.5 grammes	1,056	None	None	0.144%
February 9, 1920..	None	None	11.0 grammes	44	None	None	0.188%
February 10, 1920.	47.5 grammes	61.5 grammes	45.5 grammes	925	None	None	0.086%
February 11, 1920.	51.0 grammes	75.0 grammes	46.2 grammes	1,064	None	None	0.124%
February 12, 1920.	48.0 grammes	69.0 grammes	43.9 grammes	988	None	None	0.150%
February 13, 1920.	48.0 grammes	75.0 grammes	45.6 grammes	1,049	None	None	0.144%
February 14, 1920.	48.0 grammes	69.0 grammes	44.0 grammes	989	None	None	0.122%
February 15, 1920.	56.7 grammes	71.3 grammes	43.0 grammes	1,042	None	None	0.126%
February 16, 1920.	9.8 grammes	12.5 grammes	6.8 grammes	179	None	None	0.128%
February 17, 1920.	48.0 grammes	69.0 grammes	41.3 grammes	978	None	None	0.078%
February 18, 1920.	48.0 grammes	69.0 grammes	41.3 grammes	978	None	None	0.128%
February 19, 1920.	55.0 grammes	71.5 grammes	44.2 grammes	1,040	None	None	0.102%
February 20, 1920.	55.0 grammes	71.5 grammes	46.4 grammes	1,049	None	None	0.154%
February 21, 1920.	53.0 grammes	73.7 grammes	45.3 grammes	1,056	None	None	0.168%
February 22, 1920.	50.0 grammes	76.7 grammes	46.7 grammes	1,077	None	None	0.130%
February 23, 1920.	31.8 grammes	19.2 grammes	7.6 grammes	330	None	None	0.150%
February 24, 1920.	54.6 grammes	77.1 grammes	44.0 grammes	1,088	None	None	0.074%
February 25, 1920.	51.7 grammes	80.1 grammes	45.8 grammes	1,120	None	None	0.156%
February 26, 1920.	51.7 grammes	80.1 grammes	45.8 grammes	1,120	None	None	0.122%
February 27, 1920.	52.8 grammes	71.1 grammes	45.8 grammes	1,034	None	None	0.150%
February 28, 1920.	52.8 grammes	77.0 grammes	47.0 grammes	1,096	None	None	0.142%
February 29, 1920.	52.8 grammes	71.0 grammes	46.0 grammes	1,033	None	None	0.170%
March 1, 1920 ..	27.3 grammes	17.2 grammes	8.7 grammes	299	None	None	0.172%
March 2, 1920 ..	45.5 grammes	68.7 grammes	44.9 grammes	980	None	None	0.086%
March 3, 1920 ..	45.5 grammes	74.7 grammes	48.5 grammes	1,048	None	None	0.112%
March 4, 1920 ..	46.1 grammes	72.7 grammes	44.5 grammes	1,017	None	None	0.136%
March 5, 1920 ..	46.0 grammes	76.2 grammes	45.9 grammes	1,053	None	None	0.136%
March 6, 1920 ..	46.0 grammes	76.2 grammes	47.0 grammes	1,057	None	None	0.154%
March 7, 1920 ..	49.0 grammes	82.2 grammes	46.8 grammes	1,122	None	None	0.146%
March 8, 1920 ..	27.6 grammes	14.2 grammes	11.4 grammes	284	None	None	0.142%
March 9, 1920 ..	45.5 grammes	68.7 grammes	44.2 grammes	977	None	None	0.084%
March 10, 1920 ..	45.5 grammes	68.7 grammes	45.4 grammes	982	None	None	0.096%
March 11, 1920 ..	45.5 grammes	71.7 grammes	46.4 grammes	1,013	None	None	0.154%
March 12, 1920 ..	45.5 grammes	74.7 grammes	48.9 grammes	1,050	None	None	0.140%
March 13, 1920 ..	45.5 grammes	74.7 grammes	46.4 grammes	1,040	None	None	0.144%
March 14, 1920 ..	45.5 grammes	71.7 grammes	49.4 grammes	1,025	None	None	0.140%
March 15, 1920 ..	29.0 grammes	14.2 grammes	11.4 grammes	289	None	None	0.130%
March 16, 1920 ..	45.5 grammes	68.7 grammes	47.2 grammes	989	None	None	0.086%
March 17, 1920 ..	45.5 grammes	68.7 grammes	48.1 grammes	997	None	None	0.128%
March 18, 1920 ..	45.5 grammes	68.7 grammes	51.4 grammes	1,006	None	None	0.128%
March 19, 1920 ..	45.5 grammes	68.7 grammes	52.0 grammes	1,007	None	None	0.142%
March 20, 1920 ..	45.5 grammes	68.7 grammes	52.0 grammes	1,007	None	None	0.154%
March 21, 1920 ..	45.5 grammes	68.7 grammes	50.9 grammes	1,004	None	None	0.170%
March 22, 1920 ..	28.5 grammes	6.7 grammes	16.9 grammes	242	None	None	0.126%
March 23, 1920 ..	45.5 grammes	68.7 grammes	50.9 grammes	1,004	None	None	0.086%
March 24, 1920 ..	45.5 grammes	68.7 grammes	50.9 grammes	1,004	None	None	0.128%
March 25, 1920 ..	45.5 grammes	68.7 grammes	50.9 grammes	1,004	None	None	0.144%
March 26, 1920 ..	45.5 grammes	68.7 grammes	50.9 grammes	1,004	None	None	0.124%
March 27, 1920 ..	45.5 grammes	68.7 grammes	50.9 grammes	1,004	None	None	0.144%
March 28, 1920 ..	51.5 grammes	68.7 grammes	50.9 grammes	1,028	None	None	0.150%

RECORD OF DIETARY AND BLOOD SUGAR CONCENTRATIONS IN THE CASE OF IVAN ASHBY, 1919-1920.—*Continued.*

Date.	Intake of Food.				Acetone in Urine.	Total Sugar in Urine.	Blood Sugar.
	Protein.	Fat.	Carbo-hydrate.	Total Calories.			
March 29, 1920 ..	28.5 grammes	6.7 grammes	16.9 grammes	242	None	None	0.164%
March 30, 1920 ..	51.5 grammes	68.7 grammes	50.0 grammes	1,024	None	None	0.096%
March 31, 1920 ..	51.5 grammes	68.7 grammes	48.0 grammes	1,016	None	None	0.166%
April 1, 1920.. ..	51.5 grammes	68.7 grammes	46.4 grammes	1,010	None	None	0.154%
April 2, 1920.. ..	51.5 grammes	68.7 grammes	44.9 grammes	1,004	None	None	0.148%
April 3, 1920.. ..	45.5 grammes	68.7 grammes	45.4 grammes	982	None	None	0.160%
April 4, 1920.. ..	45.5 grammes	61.2 grammes	46.7 grammes	920	None	Trace	0.156%
April 5, 1920.. ..	29.0 grammes	14.2 grammes	11.4 grammes	289	None	None	0.152%
April 6, 1920.. ..	45.5 grammes	68.7 grammes	45.2 grammes	981	None	None	0.098%
April 7, 1920.. ..	45.5 grammes	68.7 grammes	44.8 grammes	980	None	None	0.144%
April 8, 1920.. ..	45.5 grammes	68.7 grammes	44.8 grammes	980	None	None	0.134%
April 9, 1920.. ..	45.5 grammes	68.7 grammes	45.8 grammes	984	None	None	0.148%
April 10, 1920. ..	45.5 grammes	68.7 grammes	45.8 grammes	984	None	None	0.174%
April 11, 1920. ..	45.5 grammes	68.7 grammes	47.0 grammes	988	None	None	0.160%
April 12, 1920. ..	29.0 grammes	14.2 grammes	11.4 grammes	289	None	None	—
April 13, 1920. ..	45.5 grammes	68.7 grammes	47.0 grammes	988	None	None	0.102%
April 14, 1920. ..	45.5 grammes	68.7 grammes	47.0 grammes	988	None	None	0.126%
April 15, 1920. ..	48.0 grammes	68.7 grammes	47.0 grammes	998	None	None	0.158%
April 16, 1920. ..	48.0 grammes	68.7 grammes	47.0 grammes	998	None	None	0.174%
April 17, 1920. ..	44.5 grammes	53.7 grammes	46.0 grammes	846	None	None	0.144%
April 18, 1920. ..	44.5 grammes	53.7 grammes	46.0 grammes	846	None	None	0.132%
April 19, 1920. ..	29.0 grammes	14.2 grammes	11.4 grammes	289	None	None	0.126%
April 20, 1920. ..	50.5 grammes	53.7 grammes	46.0 grammes	869	None	None	0.092%
April 21, 1920. ..	47.5 grammes	53.7 grammes	45.7 grammes	856	None	None	0.152%
April 22, 1920. ..	45.0 grammes	61.2 grammes	43.1 grammes	904	None	None	0.168%
April 23, 1920. ..	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.120%
April 24, 1920. ..	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.130%
April 25, 1920. ..	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.126%
April 26, 1920. ..	29.0 grammes	14.2 grammes	11.4 grammes	289	None	None	0.140%
April 27, 1920. ..	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.080%
April 28, 1920. ..	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.116%
April 29, 1920. ..	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.130%
April 30, 1920. ..	45.0 grammes	61.2 grammes	45.8 grammes	914	None	None	0.136%
May 1, 1920	45.0 grammes	61.2 grammes	45.8 grammes	914	None	None	0.148%
May 2, 1920	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.150%
May 3, 1920	29.0 grammes	14.2 grammes	11.4 grammes	289	None	None	0.108%
May 4, 1920	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.184%
May 5, 1920	48.0 grammes	61.2 grammse	45.9 grammes	926	None	None	0.126%
May 6, 1920	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.128%
May 7, 1920	45.0 grammes	61.2 grammes	45.9 grammes	914	None	None	0.154%
May 8, 1920	45.0 grammes	61.2 grammes	46.5 grammes	917	None	None	0.136%
May 9, 1920	45.0 grammes	61.2 grammes	45.7 grammes	914	None	None	0.158%
May 10, 1920.. ..	29.0 grammes	14.2 grammes	11.4 grammes	289	None	None	0.130%
May 11, 1920.. ..	45.0 grammes	61.2 grammes	46.5 grammes	917	None	None	0.082%
May 12, 1920.. ..	45.0 grammes	61.2 grammes	46.5 grammes	917	None	None	0.126%
May 13, 1920.. ..	45.0 grammes	61.2 grammes	46.5 grammes	917	None	None	0.102%
May 14, 1920.. ..	45.0 grammes	61.2 grammes	46.5 grammes	917	None	None	0.110%
May 15, 1920.. ..	45.0 grammes	61.2 grammes	46.5 grammes	917	None	None	0.134%
May 16, 1920.. ..	45.0 grammes	61.2 grammes	46.5 grammes	917	None	None	0.128%

Reports of Cases.

ANEURYSM OF THE ABDOMINAL AORTA AS A BASIS FOR DELUSIONS, WITH SOME OTHER UNUSUAL FEATURES.

BY R. FITZROY JARRETT, F.R.F.P.S. (GLASGOW), L.M.S.S.A. (LONDON),

AND

JOHN BOSTOCK, M.B., B.S. (LONDON), D.P.M.,

Assistant Medical Officers, Hospital for the Insane, Claremont, Western Australia.

THE following case is thought to be of some interest on account of the manner in which about the time of approximate inception and again at its termination an aneurysm of the abdominal aorta produced symptoms which were misinterpreted by an already abnormal mind, so as to form the basis of delusional ideas of persecution, while during an intervening period of nearly three years the patient made no complaint of abdominal discomfort, pain or any other physical disability.

It should be noted that in the opinion of most accepted authorities pain is a most prominent feature in this disorder. Osler in particular states that "pain is more persistent and intense in abdominal aneurysm than in any other form and gastric symptoms, particularly vomiting, may be early and deceptive features."

The patient—J.H., a barman, thirty-four years of age—was admitted to the Claremont Hospital for the Insane on June 21, 1918, apparently suffering from chronic delusional insanity of alcoholic origin.

The psychosis assumed its typical form and no features of special interest were presented during the first two years. One morning early in 1920, without apparent cause, he was exceptionally abusive to the Medical Superinten-

[1] Read at the Annual Meeting of the Western Australian Branch of the British Medical Association on March 18, 1923.

dent during the course of the latter's round. On being mildly reproved, he explained that "it was because he had a d—— brick on his back." About a month later he complained that "his enemies were working on his back with a system of electric wire." From that time until a fortnight before his death he does not appear to have made any allusion whatever to his back, his hallucinations and delusional ideas having reference to entirely different subjects. Although characteristic progressive mental enfeeblement eventually produced such a condition of mind that he was incapable of giving any proper or useful account of himself, he never appeared to be in pain and never spent a single day in bed on account of any physical indisposition.

On January 23, 1923, the charge nurse of the ward reported that the patient had been vomiting and appeared to be suffering from abdominal discomfort. He was put to bed and examination revealed slight epigastric tenderness with pulse rate of 90.

On January 25 he intimated that he felt easier, but vomited dark material of coffee ground appearance.

On January 26 he vomited several times. There was marked tenderness in the epigastrium and left hypochondrium; the patient muttered frequently about them "being on his back."

On January 31 the vomiting ceased. The patient took food eagerly and retained fluid nourishment. The pulse rate was still 90.

During the next few days there seemed slight indication of improvement in his general condition, though nothing could be elicited from him save muttered references to the fact that "the wires were still on him."

On February 6 he was much worse, obviously weaker and in great pain. The pulse had risen to 104.

On the afternoon of February 7 he suddenly collapsed and died.

The *post mortem* examination on February 8 showed that death was due to the rupture of an aneurysm of the abdominal aorta.

When the abdomen was opened practically the whole of the left side from the diaphragm to the pelvis was found to be filled by a massive sub-peritoneal clot which had pushed the viscera forward. It had to a less extent encroached upon the right side. There was no free blood in the abdominal cavity. The aneurysm was sacculated, the size of a small orange, with perforation at its lower pole, where the blood clot was undergoing organization.

The aneurysm was situated on the anterior surface of the abdominal aorta, just below the cœliac axis. Its wall was fibrous and thickened. There were numerous atheromatous plaques on the whole aorta, with some puckering of the wall from mesaortitis.

All the viscera were exsanguined, but no other abnormality was detected. The weights of the organs were: brain, 142 grammes (41 ounces); liver, 170 grammes (42 ounces); heart, 298 grammes (10¼ ounces); spleen, 198.5 grammes (7 ounces).

There was a scar on the dorsum of the penis.

We are indebted to Dr. J. T. Anderson, Inspector-General of the Insane in Western Australia, for permission to publish this case.

PUERPERAL INFECTION; LIGATURE OR EXCISION OF VEINS.

BY ARTHUR J. NYULASY, M.R.C.S. (ENG.),
Gynæcologist to the Perth Hospital.

THE remarkable success following ligation of the ovarian veins in the case detailed below and in a grave case of puerperal infection recorded by Jellett, suggests that this procedure has a valuable place in the surgical treatment of puerperal infection. In the case now to be described the result was so striking as to be almost dramatic in its effect.

Ligature of the Ovarian Veins.

A multipara, aged thirty-four years, who had been delivered five weeks earlier, was admitted to a medical ward in the Perth Hospital and placed under observation. A week later she was transferred to my care. By this time the patient was in a decidedly critical state, looking very worn and ill. Inspection of the temperature chart showed the typical features of septic infection, the temperature varying from 40.5° C. (105° F.) to subnormal on different days and the pulse rate from 90 to 132. Physical examination revealed no obvious pathological condition in any part of the body, the only deviation from the normal being a slight muco-purulent discharge from the vagina.

Operation was carried out on September 13, 1922, the temperature being 38.9° C. (102° F.), the pulse rate 132 and the respirations 32. Nothing abnormal was discovered in the interior of the uterus and on opening the abdomen the uterus appeared of normal size and colour. The only unusual feature in the pelvis was that the ovarian veins were rather distended, although no definite thrombus could be detected on gentle palpation. The ovarian veins were ligated close to the pelvic wall, the ligatures being passed well below the veins and tied over the free edge of the infundibulo-pelvic ligament. The result was most dramatic, the temperature and pulse rate dropping to normal by the next day and the patient proceeding quickly to convalescence.

The rationale of the good effect of ligation of the ovarian veins in puerperal infection is by no means clear to me. Does the mere occlusion of the veins limit the amount of poison passing from the uterus, as Jellett suggests? Does the good effect depend on cutting off lymphatic channels? Or does ligation of the veins represent an application of the Bier congestion treatment?

Simple ligation of the ovarian veins in puerperal infection has certainly been successful in only one case out of the four operated on by me. But it is to be borne in mind that these were all very severe and advanced cases. In view of the temporary improvement which followed in each case, the question than arises whether earlier ligation might not secure better final results; I am inclined to think it would.

In my experience, however, the results of excision of definitely thrombosed pelvic veins have been very much better. The explanation may be that early thrombosis occludes the vein very much as early ligature would, the patient being thus protected until softening of the thrombus, when the urgency of the case is obtruded under the notice of the surgeon.

In these cases of definite venous thrombosis Whitridge Williams sets down the mortality as nearly 67% in the absence of operation, while Lea states that from 30% to 50% of the deaths from puerperal infection are due to pelvic septic phlebitis. Impressed by such figures, I began to excise thrombosed pelvic veins in puerperal infection. Up till this time the indications for operation had been held to be: (*i.*) rigors and (*ii.*) palpability of thrombosed veins. I soon found, however, that neither of these criteria could be depended on, rigors being completely absent in many fatal cases, while definite palpation of the thrombosed veins was apt to be very uncertain and by no means unattended with risk to the patient. What, then, was to be taken as the true indication for operation? I had observed that in fatal cases in which I had operated after repeated rigors, there was always some temporary improvement. It thus occurred to me that earlier operation might have saved the patients. Without entering into details which might unduly prolong this communication, I will state the conclusions on which I have since been acting, as follows: Assuming the uterus has been cleared out and that, in spite of the absence of any obvious septic focus apart from the uterus, the patient nevertheless progressively deteriorates, we are justified in opening the abdomen, whether rigors are or are not present and whether thrombosed veins can or can not be palpated. If thrombosed veins are found, they should be excised or, at least, ligated well beyond the thrombus, while in the absence of thrombosis the ovarian veins may be ligated at or beyond the pelvic brim or hysterectomy may be carried out in some circumstances. If the uterine veins are thrombosed, they may be approached through the utero-vesical pouch. This pouch is freely opened up and the veins exposed running outwards on the face of the cardinal ligaments.

If the clot extends up to the internal iliac vein, this vessel should be tied.

Excision of the Ovarian Veins.

Two very interesting cases of thrombo-phlebitis dealt with in the Perth Hospital on the lines indicated will now be described. In five other patients pyo-salpinx was present with thrombosis of one or both ovarian veins, four of them recovering by operation.

In the first case the patient, aged twenty-six years, was delivered ten days before admission and was sent to the Perth Hospital for alleged appendicitis. There was pain and tenderness in the right iliac fossa, the pulse rate was 120, the temperature raised and the uterus large and soft. There were no rigors before or subsequent to admission, but the temperature had been of a septic type. Under anæsthesia much polypoid decidua was removed, only one small particle of placenta being detected. The patient improved and after a couple of days her condition ceased to give cause for serious anxiety, the pulse and temperature fluctuating, but not rising much above the normal. At the end of about a fortnight, however, she rather suddenly deteriorated and in a day or two the pulse rate reached 136, the respirations 35 and the temperature 39.9° C. (103.8° F.). No gross pathological lesion could be palpated in the pelvis and no septic focus could be discovered elsewhere. At operation (July 6, 1918) the right ovarian vein was found thrombosed and adjacent intestines inflamed and adherent; the uterine appendages were normal, while the appendix was healthy and practically retro-caecal. After removal of the thrombosed vein the patient quickly improved and was discharged in a few weeks.

In the second case the patient, aged twenty-eight years, was admitted twelve days after labour with the symptoms of puerperal septicæmia, streptococci being present in the blood. There was pain in the right iliac fossa, this having been complained of for many months prior to the pregnancy. The uterus was large and soft and the lochia were not offensive. After removal of much polypoid decidua (not a shred of placenta being found), the patient improved and held her own for a week, when quite suddenly the temperature shot up to 40.7° C. (105.2° F.), the pulse rate reached 136 and the respirations 32, while the right vulva was noted to be swollen. No rigors had occurred and no gross extra-uterine pelvic lesion could be palpated, there being merely a little tenderness on pressure in the right lateral vaginal fornix. At operation (November 22, 1919) the right ovarian vein was found thrombosed, while an old but slight right salpingitis was present. On removal the vein was found to contain pus in the centre of the clot. The patient improved quickly and was well in a few weeks.

Reviews.

MODERN VIEWS OF THE HEART.

"THE DIAGNOSIS AND TREATMENT OF HEART DISEASE," by E. M. Brockbank, is a book which has reached its fifth edition and, though only a small book, it contains a wealth of information.[1] It gives us in the first seven chapters a complete description of the routine examination of patients, the heart sounds and murmurs associated with incompetency of the various valvular orifices. The author quite correctly takes exception to the theory that the re-duplication of the first sound is due to a want of synchronous contraction of the two ventricles. An alternative hypothesis is put forward. There are some interesting remarks on the re-duplication of the second sound, which cannot be due, as is often stated, to the asynchronous closure of the aortic and pulmonary valves.

The subject of murmurs is dealt with in some detail. Emphasis is laid on the fact, however, that the outlook in heart disease depends entirely on the condition of the heart muscle.

A chapter is devoted to some of the general physical signs and symptoms of heart disease. "When additional strain is thrown gradually on a heart, enough new muscle is produced to meet the extra demands and hypertrophy results. In the most favourable conditions this hypertrophy is quite sufficient to meet the extra work and no signs of muscle failure appear. This condition is one of perfect compensation; it gives rise to no symptoms." This statement can be questioned. That hypertrophy may arise in those conditions is true, but it is not true that it always arises where we should expect to find it. This is proved by weighing of the ventricles *post mortem*.

Though strain must be admitted as a factor in the causation of hypertrophy, it does not account for all the observed facts.

Electro-cardiographic illustrations are produced typical of the various cardiac irregularities and this chapter is concise and accurate and brings out the more important points of differences in the rhythm of the heart.

The author's views on treatment are good and clearly defined, though objection can be made to certain of his ideas on the action of digitalis. Of the value of digitalis in auricular fibrillation everyone is in agreement, but the same cannot be said regarding his views of the action of digitalis in other conditions.

Chapters are devoted to the heart in school children and the examination of the heart in life assurance. The author gives his opinions evidently based on a wide experience and they are definite ones.

In the compass of two hundred and twenty-eight pages is comprised much valuable information and detail. The book can be well recommended.

MODERN BIO-CHEMISTRY.

IF the reader is looking for a text-book of physiology he will find Macleod's "Physiology and Biochemistry in Modern Medicine" lacking in the completeness sought for in a book of that description.[1] But the fact that this work has already gone into four editions, shows that it has been found by the medical practitioner to be of far greater interest and service than the mere encyclopædia of facts which text-books often tend to become.

Professor Macleod has set out to take the chief parts of his subject which are of clinical importance; while he has succeeded in giving a clear exposition of the purely scientific side of the work, he has also admirably pointed out the practical applications of the principles involved. Only too often does the medical student or even the practitioner busy with clinical work ask of what benefit is some piece of research in bio-chemistry or physiology, where is it leading and of what help will it ultimately be to him? It is because Macleod has answered these questions, has shown the actual use in practice of the latest discoveries in his field, that this book has been found to have a unique value and interest.

In the fourth edition many improvements are to be found. The sections on the neutrality of tissue fluids have been extensively rewritten. The modern work on the hydrogen ion concentration of the blood, the mechanism for its maintenance at a constant level and the deviations that may occur experimentally and pathologically, has all been thoruoghly sifted and presented to the reader in a clear and lucid fashion. In addition, a brief *résumé* of the recent work on diabetes under Macleod, which has excited so much interest, is given. These, combined with the bringing up to date of the sections on the circulation and respiration, unite to make this edition of even greater merit than its predecessors.

[1] "The Diagnosis and Treatment of Heart Disease," by E. M. Brockbank, M.D. (Vict.), F.R.C.P.; Fifth Edition; 1923. London: H. K. Lewis & Company, Limited; Crown 8vo., pp. xii. + 232, with 25 illustrations, including three plates. Price: 6s. 6d. net.

[1] "Physiology and Biochemistry in Modern Medicine," by J. J. R. Macleod, M.B., assisted by Roy G. Pearce, A. C. Redfield and N. B. Taylor and by others; Fourth Edition; 1922. St. Louis: C. V. Mosby Company; Royal 8vo., pp. xxxii. + 992, with 243 illustrations, including nine plates in colour. Price, $11.00.

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Suggestion.

BUT a few years ago no one challenged the accuracy of the doctrine of the Salpetrière school, of the Nancy school and of authorities like Forel, Wetterstrand, Byron Bramwell and Lloyd Tuckey. It is true that on the question of the suggestibility of persons of unsound mind there was difference of opinion between the follows of Charcot and the adherents of the Nancy school. But everyone was agreed that the basis of the benefit derived from hypnotism, from the exhibition of the majority of medicinal substances, from the gaining of the influence of the practitioner over his patient, from the thousand and one methods employed by successful lay persons, including the clergy, is suggestion. In this issue Dr. Bostock takes up the plea for the restoration of this doctrine and his arguments are both forceful and sound. It would appear that the non-medical psychologist, emboldened by the dangerous and unproven hypotheses of Freud, Jung and their followers, have carried these ill-understood problems from their medical environment to a lay forum with resulting chaos. That Freud and others maintain that psycho-analysis does not depend on suggestion is merely an opinion. Many medical practitioners well versed in medical psychology and psychiatry hold the opposite view and support their contentions with strong argument. Forel found it possible to disclose the repressed emotion and the sub-liminal events by means of waking and hypnotic suggestion with greater ease than do the psycho-analysts with their suggestive questionings and arbitrary interpretations of associated words and ideas. There are too many instances in the history of medical practice of the unmistakable influence of pure suggestion for anyone to deny its power. Dr. Bostock gives a few. The therapeutic value of the thermometer placed under the tongue, the disappearance of pain after a hypodermic injection of pure water and many other extremely common occurences in every-day practice cannot be interpreted in any other way. Had it not been that the medical profession was timid in proclaiming the therapeutic value of hypnotism when it was largely in the hands of charlatans and in employing waking and hypnotic suggestion deliberately and openly, this question would not have been raised. The claims of the psycho-analysts and of the persuasionalists is of small moment, since a sound practitioner of medicine will not restrict his practice to the exploitation of one method or system, but will use all measures that are found to be of advantage to his patient. By using suggestion in its unalloyed form he must recognize its extraordinay power of removing subjective symptoms and restoring peace of mind.

Much better and more lasting results can be obtained from treatment by suggestion if it is applied deliberately and if the practitioner has studied the subject with care. At the present time there is a tendency for this form of treatment to slip from the hands of the medical profession into those of lay psychologists whose vision is limited because they have no knowledge of the ætiology and pathology of disease and of the intimate association between structure and function. For example, there are few who would deny that the summoning of the correct word by the memory in speech is a psychic phenomenon. But a hæmorrhage into Broca's convolution, destroying brain cells, robs the individual of the power to recall the word he desires to use. Whether all thoughts are dependent on the functional activity of particular brain cells or not is still unknown. In other words, those who hold that the higher intellectual qualities, like motion and sensation, have special centres in the infra-granular layer of the cerebral cortex, must produce definite evidence before the hypothesis can be converted into a demonstrated doctrine. But there is this remarkable fact that any agent, be it trauma, infective process or degeneration, that disturbs the physiological activity of the cortical cells of the brain, disturbs the consciousness of the individual and robs him temporarily or permanently of the power of initiating ideas, of reasoning and of controlling his actions. This close association of structure of the brain with the higher functions of thought, intel-

lectual reasoning and memory, as well as instinct, association of ideas and automatism, is far too important to be brushed lightly aside in favour of an entirely psychical hypothesis. The application of suggestion at the hands of the skilled medical practitioner is safe, because he is ever on the watch for indications of structural lesions which cannot be healed by this agent. He realizes that the subjective symptoms are not the disease and may be not even a manifestation of the disease from which the patient is suffering. The symptoms that can be modified and removed by suggestion, often stand between the patient and recovery from disease, even if they are born of his own unstable nervous system and awakened by a concatenation of circumstances nearly or remotely related to the disease or its cause. Psycho-analysis or Forel's method of making the patient re-build the record of past events during hypnosis or any other modification of suggestion may yield valuable results if applied by someone who realizes the significance of emotional disturbance in the course of disease and recognizes the material factors of the disease process, despite the masking by these emotional disturbances. Dr. Bostock's article is a valuable contribution to a subject that is but rarely faced with frankness and courage. It should warn the medical profession of the danger arising from within by the Freudians, who are blind to other useful methods of applying suggestion, and from without by the intervention of laymen who have not spent years in the study of the anatomy and physiology of the human body and the ætiology and pathology of disease.

MEDICAL CERTIFICATES.

FROM the early days of medicine it has been customary to obtain from a medical practitioner a written statement of his opinion in regard to illness from which an individual is suffering and the progress he is making towards recovery. This statement of opinion may be written at the request of the patient or at request of some other person, such as an employer or near relative. It is, however, necessary that in the latter case the consent of the patient be obtained before a certificate is issued. Consent will not be necessary in criminal jurisdiction, if it is necessary to investigate the bodily condition of an accused or suspected person. In criminal investigations the police authorize an examination, which is generally conducted by the police surgeon or the government medical officer. This officer may be called upon to furnish a certificate. In the second place, consent is not necessary in dealing with a person deemed to be insane. The certificate in such circumstances may be issued either as part of the sworn testimony given in court before a magistrate or else as a result of an examination made privately at the request of a responsible person who has signed the request form for presentation to a hospital for the insane. The responsibility of the practitioner in either instance is a serious one. There is a third condition in which an examination with a view to certification is undertaken at the request of a third person, who is responsible for the payment of the required fee. Under such a heading come all examinations for insurance companies and for admission to the public services. The proponent may and often does undergo the examination unwillingly and even under protest. Here submission to the examination is taken as consent, though this may not actually have been given.

A medical certificate may be regarded as a statement of facts and an expression of the opinion of the person who signs it. This opinion should be formed as a result of personal knowledge obtained by means of an examination. Observed facts and reasonable deductions from them are the only basis for the formation and expression of any correct opinion. A conclusion which has been formed as a result of hear-say evidence, is valueless and in some instances an *ex parte* statement of a patient in regard to events which the medical practitioner cannot observe for himself, must be entirely disregarded. From the practitioner's point of view, it must always be remembered that it may be difficult to take a frankly impartial view of some situations. A regular family physician enters more or less into the life of the individual members of a family. Their interests may be said to be to a certain extent his interests. That sentiment may have a place in his feelings for and dealings with them is not unnatural. In these circumstances he may find it difficult to be an impartial adviser in the issuing

of certificates. What so often happens is that the practitioner unconsciously tries to please the person asking for the certificate, without taking into account all the circumstances which may be involved. If a certain amount of deliberation, however, is taken, his duty will generally be clear.

The patient's point of view in regard to a medical certificate is not always the most admirable. It is really surprising how many people there are who will ask a medical practitioner to give a certificate for an illness that has not come under his notice, an illness that has not been as severe as they would have him believe or one that has not occurred at all. They would pay a man to become a liar. Every practitioner has had experience of this sort of individual. When the request is refused, he is surprised and cannot understand the want of morality in the proposal he has made. The medical man who is careful in the accuracy of his certificates, becomes unpopular with these crooked individuals. He may indeed lose a certain amount of immediate practice, but he will gain in the long run and what is more he will retain his self-respect.

From the point of view of employer or adjudicator of claims for whose use a certificate may be written, the question of accuracy is necessarily of vital importance. A certificate that is honest and correct, will carry weight and the production of the doctor who is prepared to "stretch a point" for the patient concerned, will eventually become known and disregarded.

In the wording of a certificate clearness and conciseness of diction are essential. Not only should the document be dated, but the date of examination on which the certificate is based should be stated. Where possible a definite diagnosis should be included. If a definite statement in this regard cannot be made, it may be possible by means of some words of explanation to give ample evidence of the writer's *bona fides*. In any case all ambiguity of expression should be avoided.

It is important to note that the General Medical Council of Great Britain takes such a serious view of the necessity of care and accuracy in the signing of certificates that it issued the following warning notice in the form of a resolution which was adopted on November 30, 1911:

> Whereas registered practitioners are in certain cases bound by law to give or may be from time to time called upon or requested to give, certificates signed by them in their professional capacity, for subsequent use either in courts of justice or for administrative purposes. And whereas such certificates include among others:
>
> Certificates—
>
> (*a*) Under any statute relating to births, deaths or disposal of the dead.
> (*b*) Under the *Lunacy Acts*.
> (*c*) Under the *Vaccination Acts*.
> (*d*) Under the *Factory Acts*.
> (*e*) In relation to children or to excusing school attendance.
> (*f*) In connexion with sick benefit, insurance and friendly societies.
> (*g*) In connexion with workmen's compensation.
> (*h*) In connexion with naval or merchant shipping.
> (*i*) For procuring the issue of Foreign Office passports.
> (*j*) For excusing attendance in courts of justice, in the public services, in public offices or at ordinary employments.
>
> And whereas it has been made to appear to the General Council from time to time that some registered medical practitioners have given and signed untrue, misleading or improper certificates of the above specified or other descriptions.
>
> Now, therefore, the General Medical Council hereby give notice that any registered medical practitioner who shall be shown to have given any untrue, misleading or improper certificate, whether relating to the several matters above specified or otherwise, is liable to be adjudged by them to be guilty of "infamous conduct in a professional respect" and to have his name erased from the Medical Register under Section 29 of the *Medical Act, 1858*.

There appeared in the public press of Victoria recently a statement that the Public Service Arbitrator, in giving judgement on a claim by the Postal Electricians' Union, has said that it was well known that certificates of private practitioners in such general terms as neurasthenia and nervous debility could not be taken as a reliable guide. The indictment is a serious one. It must be remembered that the departmental medical officer is in much the same position as the regimental medical officer. He is concerned with the machine and possibly looks on his men as units in that machine. His duty is to keep the ranks full. He may possibly err in this direction. The certificate of the departmental medical officer for this reason may be more acceptable to the department. The issues of reliability and acceptability must not be confused. The private

practitioner is concerned with his patient as the bread-winner of another unit—the home. He sees things in a different perspective. At the same time there may be some grounds for the Arbitrator's statement in a too sympathetic view on the part of the private practitioner. In the vast majority of instances he does not err intentionally on the wrong side. Let him be humane and look after his patient's interests, but at the same time he must not let his sympathetic tendencies run away with him. Plain statement of fact and the application of common sense to certificates will make it impossible for slurs to be cast at the medical profession in the public press.

Current Comment.

DIASTASE TESTS AND RENAL EFFICIENCY.

It was Wohlgemuth who first studied the diastatic content of the urine in relation to disease. He began this work in 1908. He found that the amount of diastase which was excreted in the twenty-four hours' specimen of urine of a normal man, showed little variation and was in fact almost constant for a given individual. Corbett in 1913 confirmed the work of Wohlgemuth. He found that the excretion of diastase in the urine was usually diminished in the presence of renal disease and diabetes and that it was increased in eclampsia. He held that an increated ratio between the urinary content of the ferment and the blood content of the ferment was an indication of renal insufficiency. Fitz in 1915 compared the diastase content of the urine and the blood and the non-protein nitrogen content of the blood in a series of animals in which he had induced an experimental nephritis by the injection of uranium nitrate. He found that with the onset of nephritis there was a considerable variation from normal in the urinary diastase and the non-protein nitrogen of the blood. Both were diminished and returned to normal with the cessation of the nephritis. The diminished diastase excretion was but little influenced by the accumulation in the blood. Gelyelin compared the excretion of diastase with that of phenol-sulphone-phthalein in a series of patients suffering from nephritis. He found that the results obtained were essentially similar. Brown investigated the diastatic content of urine. He found that diastatic activity was present in the majority of instances of renal disease, but could find no constant and definite relationship between diastatic activity and function as shown by the phenol-sulphone-phthalein test and by the clinical findings.

Dr. G. A. Harrison and Dr. R. D. Lawrence have recently investigated the question of diastase in blood and urine as a measure of renal efficiency.[1] First of all they tested the diastase content of the serum and plasma of twenty-five patients. Corbett found that the values for serum were a little higher than those for plasma. Drs. Harrison and Lawrence found that the values for serum and plasma were in every instance identical. They then tested the blood diastase of several healthy persons and of patients suffering from diabetes. The maximum variation for any individual was one unit. They therefore conclude that for clinical purposes it is sufficient to make a single estimation of blood diastase at any time of the day and that it is justifiable to compare such a result with the diastatic index of a twenty-four hour samples of urine. The blood diastase of twenty-four healthy persons varied from three to seven units and of twenty-three convalescent hospital patients from three to ten units. They have taken as normal the blood diastase whose index was above three and below ten. These findings agree with those of other observers. The readings of urine diastase in normal persons agree with those of other workers, namely, between 6.7 and 33.3 units for twenty-four hour specimens. They record the results of tests applied to forty-three patients suffering from kidney disease. In six instances diminished excretion of diastase with retention in the blood was noted. That is, the blood diastase reading was above ten and the urine reading below 6.7. In seventeen instances there was diminished excretion of diastase without retention in the blood. In twenty instances the excretion was normal, that is, the concentration of diastase was higher in the urine than in the blood. By comparison of these results with those obtained from other tests of renal efficiency, Drs. Harrison and Lawrence conclude that diastase retention only occurs when at least three-quarters of the total kidney substance has been thrown out of action. As controls they examined the urinary and blood diastase of one hundred and eighty patients suffering from a variety of diseases. Diminished excretion of diastase with blood retention was not seen except in patients with severe renal lesions. On the other hand, diminished excretion without retention was found in two patients with hepatic disease, seven with *diabetes mellitus*, three with pernicious anæmia, one with gastric ulcer and one with gastric carcinoma. In none of these patients was there clinical or bio-chemical evidence of kidney disease. The suggestion is made that diminished excretion of urinary diastase without retention in the blood may result from lessened formation of the ferment in the tissues and that this may be due either to a general depression of metabolism or to low diets or to both factors. In a note at the end of the article reference is made to some work by Sladen and the suggestion is made that some of the instances of diminished excretion of diastase without retention in the blood may be affected by the reaction of the urine.

Dr. Arthur F. Sladen investigated the question of the diastatic reaction of the urine and paid particular attention to the hydrogen ion concentration.[1] Dr. Sladen pointed out that Wohlgemuth did not lay stress on the necessity of adjusting the acidity of the urine before testing. Wohlgemuth used the

[1] *The Lancet*, January 27, 1923.

[1] *The Lancet*, July 8, 1922.

diastase test more particularly for the diagnosis of pancreatic disease and in this condition the diastatic content of urine is increased. In urine of this kind the importance of the pH adjustement diminishes because the relative quantity of urine in the end point tube becomes so small. Dr. Sladen also refers to Corbett's statement that variations in the reaction of the urine were not of importance and quotes Mackenzie Wallis as concurring with this statement. Cole laid stress on the desirability for adjusting the hydrogen ion concentration in the determination of diastatic content. It is not necessary to go into the methods used by Dr .Sladen in the pH adjustment. He tested the urine of a number of persons, some normal and some suffering from various diseases. Each sample of urine was tested in the uncorrected state and again after the hydrogen ion concentration had been corrected to 6.7. The readings from the samples of uncorrected urine gave misleading information in at least half the instances. The readings in the corrected samples had for the most part a significance that was of diagnostic value. Thus in one instance the reading in the uncorrected urine was two units. When the hydrogen ion concentration was brought up to 6.7, the reading from the test was thirteen units. Dr. Sladen concludes that in all tests for diastatic activity in urine the hydrogen ion concentration should be corrected to the optimum pH 6.7.

If the work of Drs. Harrison and Lawrence be reviewed in the light of Dr. Sladen's work, it will be seen that, though the former is a valuable contribution to the sum total of knowledge on the subject, it would be considerably enhanced in value if the whole observations could be repeated in specimens which had been controlled as far as hydrogen ion concentration was concerned.

SYPHILIS AND INDUSTRIAL DISABLEMENT.

THE effects of syphilis may be divided into two groups, the immediate and the remote. From the industrial point of view the main interest in the immediate effects of syphilis lies in the danger of the transmission of the disease from one person to another. The remote effects are not always so obvious. Syphilis may occur as a complication to many diseases. The fact of its presence may not be recognized. Thus a knee which has been injured, may take a long time to return to normal and this delay may be due to chronic arthritic changes of a syphilitic nature. The same delay may be occasioned by the presence of syphilis in a patient suffering from a burn or from almost any other injury. In regard to para-syphilis in its early stages, investigation of the mental state of the patient is essential. The relation of an impaired mental state to industrial conditions is important in that its early recognition is difficult. It would be obviously improper to entrust to the care of an individual suffering from the grandiose ideas of early general paralysis of the insane the control of any means of locomotion plying for passenger traffic, or the control of machinery operated by other employees and used in a manufacturing process. Given the administrative and legislative measures for the control of syphilis in all its stages and given the acquiescence of employees in regard to examination, the question of the recognition of syphilis in any but its active stages is fraught with difficulty. The history of infection as given by the patient is quite unreliable. Evidence may be obtained from the presence of scars in the neighbourhood of the genitalia and other parts. This, however, is a poor reed upon which to lean. The most reliable evidence that can be obtained, is given by the Wassermann test. The introduction of the ice-box method has added to the value of this test and the findings in regard to the cerebro-spinal fluid are in some instances more reliable. Great difficulty would probably be experienced in obtaining submission to lumbar puncture by employees in what would appear to them to be a routine examination, apart from the debatable question as to whether this would always be justifiable from the point of view of the examiner. The occurrence of a reaction in the blood serum may be taken for all practical purposes as an indication of infection by syphilis. The failure to obtain a reaction, as has so often been pointed out, is not to be taken as evidence of the freedom from infection.

The importance of considering syphilis from the point of view of industry has been demonstrated and an inquiry into its icidence has recently been made by Dr. Page Edmunds.[1] Dr. Edmunds's attention was first directed to this question by the relief department of a large company, on account of delayed convalescence and prolonged disability among the employees. The condition of some two hundred and ninety-one persons was investigated. In sixty-nine instances it was not deemed necessary to submit the serum to a Wassermann test. In two hundred and twenty instances a Wassermann test was made. A reaction was obtained in thirty-five of these. In thirty-two of these thirty-five a reaction was obtained in the serum, in the remaining three it was obtained in the cerebro-spinal uid. In only twelve instances was a history of syphilis obtainable. Nineteen of those affected suffered from cerebro-spinal syphilis and fourteen of this number were railway employees and were concerned in the running of trains. Dr. Edmunds points out that he is not in a position to say that syphilis was the sole cause of the disablement. It was, however, the means of prolonging the original disablement. Without exception he found that it was necessary to administer anti-syphilitic treatment. In more than one instance a diagnosis of early geenral paralysis was made.

These observations of Dr. Edmunds are of interest from several points of view. In the first place, attention is drawn to the necessity for careful initial examination with a view to the elimination of persons suffering from syphilis in an active form. Careful search for signs of healed lesions will often be the means of determining the necessity or otherwise of having a Wassermann test performed. Secondly, observations of this sort are the means of emphasizing the often forgotten fact that absence of lesion does not necessarily mean that a cure of the disease has been obtained.

[1] *The Journal of Industrial Hygiene*, January, 1923.

Abstracts from Current Medical Literature.

OPHTHALMOLOGY.

Cataract Extraction.

DORLAND SMITH (*Archives of Ophthalmology*, January, 1923) endeavours to formulate rules and principles to guide the surgeon in his choice of operation for cataract extraction. He has a prejudice in favour of some form of intra-capsular extraction when possible. In children and young people needling and linear extraction are indicated. In patients with senile cataract zonular rupture by the Smith method is apt to be too difficult in those under fifty-five or sixty years of age and it is wiser to perform extraction with capsulotomy. In immature cataracts showing an iris shadow capsulotomy operations are not satisfactory. Better results are obtained with intra-capsular extraction. Swollen or intumescent cataracts, pearly white and flocculent in appearance, are best suited for the Smith operation. Mature cataracts are suitable for the capsulotomy operation, their capsule is too thin for extraction by traction on the capsule. The hyper-mature cataract, small in bulk, with a thick, strong capsule, is best suited to intracapsular extraction by one of the traction methods. Both capsulotomy extraction and pressure extraction in the capsule are apt to be attended with loss of vitreous. In very old people sclerosed lenses with large nuclei are most safely extracted by the capsulotomy operation, though for the experienced operator Smith's operation is ideal. Myopic eyes are best dealt with by a capsulotomy operation, but eyes with posterior synechiæ or uveal disease or with a tendency to glaucoma do best with the intra-capsular operation. Fat people with bulging eyes and tight lids are bad subjects for intra-capsular operation, whereas thin folk with sunken eyes and loose lids are good subjects. The question of skilled assistance and the skill of the operator are also deciding factors.

Pulsating Exophthalmos.

L. B. WHITMAN (*American Journal of Ophthalmology*, February, 1923) records seven instances of pulsating exophthalmos, reviews the literature of the subject and discusses the treatment. The first patient was a man of thirty who met with a motor-cycle accident and fractured his skull. His left eye showed pulsating exophthalmos. A diagnosis of arterio-venous aneurysm, probably of the internal carotid and cavernous sinus, was made and the patient was cured by ligature of the left internal carotid artery. The second patient, a man of forty-nine, suffered severe head injuries from a street car accident and developed pulsating exophthalmos of the left eye. He suffered from aphasia; the cornea was steamy from the wide stretching of the eyelids. Six weeks after the initial symptoms of the aneurysm the left internal carotid was tied with an excellent result. The third instance was that of a woman who developed exophthalmos thirteen days after childbirth. She had high blood pressure, but no traumatism; the external rectus muscle was paralysed. She also was cured by ligature of the internal carotid artery. A fourth patient, victim of a motor-car accident, was also cured by ligature of the internal carotid artery. A fifth instance, also traumatic, was successfully treated by ligature of the external carotid artery and the application of a metal band as described by Halstead to the common carotid. The sixth patient, some weeks after a miscarriage, developed paralysis of the left external rectus muscle and proptosis with a bruit. She died from influenza before surgical intervention. The seventh patient was a man of fifty-eight years of age. There was no history of accident. He refused surgical treatment and after seven years the condition is unchanged. After reviewing the literature the author describes the chief operative procedures as follows: Ligature of the common carotid on the affected side; ligature of both common carotids; ligature of the internal carotid on the affected side; ligature of both internal and external carotids on the same side; ligature of the common carotid, external carotid and superior thyreoid arteries on the one side; orbital operations, such as ligature of the superior ophthalmic vein, ligature of pulsating veins at the inner angle of the orbit. Concerning the suitability of these several types of operation there are many conflicting opinions. De Schweinitz and Holloway maintain that by ligature of the common carotid a record of cure or improvement was obtained in 50% of patients and that 11% died. The author favours ligature of the internal carotid, preceded by daily compression of the carotid for several weeks. Failing this, tying of the ophthalmic veins should be done before other ligations of the carotids.

Keratitis Disciformis.

P. KNAPP (*Revue Générale d'Ophtalmologie*, July, 1922) publishes an account of the theories explaining *keratitis disciformis*. From his own observations he concludes that this form of keratitis follows herpetic infection of the cornea. The original superficial ulcer of the cornea soon heals up, leaving an infection which attacks the deeper layers and produces the characteristic grey mass. As the ulcer may be painless the patient often does not consult the oculist until it has healed and the deeper infection has begun to diminish the vision. The herpetic vesicle contains a virus which is transmissible to animals.

Ætiology of Sympathetic Ophthalmia.

H. H. STARK (*American Journal of Ophthalmology*, January, 1923) believes that sympathetic ophthalmitis is of tuberculous origin and will shortly publish his experiments in this connexion. Two-thirds of the instances of this condition occur in early life, before the individual has acquired immunity to tuberculous infection. The clinical features of sympathetic plastic irido-cyclitis, chorioiditis, nodules in the iris, all are common to ocular tuberculosis. The pathological appearances of sympathetic ophthalmia, as described by Fuchs, show a close resemblance to tuberculosis.

Bitemporal Contraction of Visual Fields in Pregnancy.

C. E. FINLAY (*Archives of Ophthalmology*, January, 1923) had occasion to examine a woman in the eighth month of pregnancy and found she had bitemporal contraction of both fields, more extensive on the right side. Following on this he examined thirty-one women with normal vision awaiting confinement and found nine only in whom the fields were normal. In eight women there was slight contraction of both temporal fields, in nine there was moderate contraction and in five pronounced contraction. The condition is explained by pressure on the chiasma of the enlarged pituitary gland, which according to Shafer increases to two or three times its normal weight and volume during pregnancy.

Operation for Pterygium.

L. W. CRIGLER (*Archives of Ophthalmology*, November, 1922) describes a new operation for pterygium. The growth is grasped at the limbus and a small incision is made above and below to admit a flat spatula, by which the pterygium is removed from the cornea by blunt dissection. Beginning at the upper limbal border, an incision downwards and inwards is made with scissors, extending to the lower border of the body of the pterygium. A second incision is made from the lower limbal border horizontally to meet the first. The growth between the two incisions is removed. A suture is passed through the middle of the upper conjunctival flap to the limbus below. Here it should take up the superficial layers of the sclera before coming through the conjunctiva. A second suture is placed half way between the inner angle of the wound and the limbal stitch.

Therapeutic Use of Uveal Pigment in Sympathetic Ophthalmia.

A. C. WOODS AND A. KNAPP (*Archives of Ophthalmology*, November, 1922) report the use of uveal pigment in the treatment of a patient suffering from sympathetic ophthalmia. The patient was a boy, aged eight years, who had been operated upon for perforating corneal ulcer and prolapsed iris following gonorrhœal conjunctivitis. Six weeks later the other eye showed ciliary injection, posterior corneal deposits and synechiæ. The first eye was enucleated and the usual treatment adopted, pilocarpine sweats, mercurial inunction and large doses of sodium salicylate, without any effect. No reaction was obtained in the serum with an antigen of uveal pigment. The intra-dermal reaction to uveal pigment was strikingly positive, showing hyper-

sensibility to pigment. The treatment with uveal pigment consisted in desensitization, followed by active immunization. With the exception of a brief exacerbation, in a few weeks the eye began to quieten and ultimately showed a vision of $^{6}/_{60}$.

LARYNGOLOGY AND OTOLOGY.

Tonsillectomy in Systemic Diseases.

NOËL WHITTON (*Journal of Laryngology and Otology*, November, 1922) records the results obtained by the removal of septic tonsils in patients with certain diseases. The investigation covered a period of seven years. In eight of eleven patients with chorea movements were still manifest, though four of the eight had improved. Of six patients suffering from epilepsy, four were found free from fits, while the other two had improved. Of seven patients suffering from simple goitre, one was free from swelling in the neck, two had improved and four showed no change. The two patients free from symptoms had had severe forms of the disease. Of twenty-three patients suffering from rheumatism of all varieties, fourteen were free from symptoms, three had improved and six had not improved. Of the fourteen patients free from symptoms, seven had suffered from one or more attacks of acute rheumatism and the other seven had suffered from a chronic articular condition. In three of the latter the joint trouble disappeared within a month of the tonsillectomy.

Carcinoma of the Pharynx.

WALTER HOWARTH (*Proceedings of the Royal Society of Medicine*, September, 1922) describes an operation by lateral pharyngotomy for the removal of a growth in the lower portion of the pharynx, extending almost to the œsophageal opening. The extirpation entailed the complete severance of the œsophagus from the pharynx, leaving a gap of about thirty-seven millimetres. An end-to-end anastomosis was made. The neck wound healed and the tracheotomy tube was removed on the tenth day. Fifteen days after the operation the patient collapsed and passed five hundred and seventy cubic centimetres of blood *per rectum* and next morning two hundred and eighty-five cubic centimetres. The œsophageal feeding tube was removed. Five months after the operation solid food could be swallowed with some difficulty if great care was taken.

Benign Forms of Otogenic Meningitis.

HOLGER MYGIND (*Journal of Laryngology and Otology*, December, 1922) has presented his observations on two hundred and ten instances of meningitis of all forms, caused directly or indirectly by acute or chronic middle ear suppuration. He found that benign forms of otogenic meningitis appeared most frequently in children between five and fourteen years of age and that children of this age were most frequently attacked by meningitis. Middle ear suppuration appears most frequently in this decade of life. The percentage of recoveries amongst children under five years of age was comparatively small, the absolute frequency of meningitis being, however, much less than might be expected from the frequency of middle ear suppuration at this age. The percentage of recoveries was seen to decrease in adults with increasing age, being particularly low after fifty, the number of patients attacked, however, being small. Chronic suppuration of the middle ear was more frequently the cause of benign than of malignant meningitis. Pneumococcal infection was found to play the principal part in malignant infections; *Bacillus coli* infection was especially virulent, while streptococci were predominant in milder infections. Instances of otogenic meningitis occurred at certain periods in such numbers that the impression was given that epidemic influences were at work, also that otogenic meningitis was at some periods more benign than at others. The greatest number of benign infections occurred when meningitis was combined with phlebitis of the sigmoid sinus.

Endolaryngeal Mirrors.

IRWIN MOORE (*Proceedings of the Royal Society of Medicine*, September, 1922) has devised an adaptation of Michel's post-nasal mirror to be used with the bronchoscopic tube for the examination of the upper bronchus on the right side, which is out of the direct line of vision. A mirror with a shorter shank is used with the short Killian spatula for examination of the sub-glottic area. Each mirror is supplied with a powerful magnifying glass. General anæsthesia with ether by the open method is advised.

Mixed Tumours of the Mouth and Respiratory Tract.

F. HOLT DIGGLE (*Journal of Laryngology and Otology*, October, 1922) states that mixed tumours, *id est*, tumours presenting elements of ectodermal and mesodermal origin, frequently arise in the salivary glands, but rarely in the mucous membranes. They are of slow growth, frequently encapsuled and, unless modified by sarcomatous or carcinomatous changes, do not cause glandular involvement or internal metastases. There is apparently no predilection as to sex and advice is sought on account of the increasing size of a tumour in existence for several years. Ewing states that the derivation of mucous tissue and cartilage from epithelium has been proved and the endothelial origin disproved and that no single source of the mixed tumour can be shown to fit all instances. They usually present a uniform swelling, if small, often mobile, situated to one side of the middle line. If the tumour is situated in the pharynx, dyspnœa and dysphagia may occur. Only one instance of such a tumour in the larynx is on record. Mixed tumours occur more frequently on the hard than on the soft palate. The lips, especially the upper, may be the site. The prognosis depends upon the age of the patient, the rate of growth of the tumour, its encapsulation and the completeness of its removal at operation. Incomplete removal is followed by extensive local recurrence. The tumour usually shells out readily after incision of the capsule.

A Case of Bezold's Mastoiditis.

C. NORMAN HOWARD (*The Journal of the Indiana State Medical Association*, July 15, 1922) reports an instance of Bezold's mastoiditis occurring after thirty years of middle ear suppuration which apparently started after a mild attack of diphtheria. The patient, a man, aged thirty-five years, complained of pain and swelling in the left side of the neck, together with anorexia, fever and pain on opening his jaws. There was pus in the external meatus and a polypoid mass antero-superiorly. There was no hyperæmia of the drum membrane or bulging of the posterior wall. Whisper was heard at thirty centimetres. There was tenderness two and a half centimetres below the mastoid tip, but none over the antrum. The mastoid was found occupied by cheesy, foul-smelling pus; an opening on the median mastoid wall near the tip led down into the soft tissue of the neck, from which a large quantity of pus was obtained. The middle ear was full of pus, but the radical operation was not performed on account of his good hearing. The dominant organism in the pus was considered by several pathologists to be a motile diphtheroid, which decolorized by the Gram method of staining.

Cancer of the Larynx.

ST. CLAIR THOMSON (*The Lancet*, July 22, 1922) has recorded the results of laryngo-fissure for fifty-one patients with intrinsic cancer of larynx operated upon by himself. The right cord was affected twenty-six times, the left twenty-five. The anterior commissure and part of the opposite cord were affected in five of these patients. The cord was immobile in eight, movement was impaired in fourteen, but the other twenty-nine patients suffered no complications. There were three instances of recurrence in glands of the neck, one after four months, one after eight years, one after one and a half years. The former two died. Two patients died within forty-eight hours after operation, though in neither case could death be attributed directly to the operation. Of the fifty-one patients, thirty were free from recurrence and alive at periods varying from one to thirteen years and eleven survived from various periods up to ten years and died from other disease. Many of the patients had suffered from the disease for a considerable time and were unpromising subjects for operation. The author suggests the division of intrinsic cancers into (*i.*) chordal and (*ii.*) sub-glottic types. Fourteen of the fifty-one patients suffered from the sub-glottic type and of these five died from recurrences. All five had fixation or impairment of mobility of the cords. The prognosis is much worse in this type and when the cord is fixed or impaired in movement.

British Medical Association News.

ANNUAL MEETING.

THE ANNUAL MEETING OF THE WESTERN AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Hospital for the Insane, Claremont, on March 18, 1923, DR. D. D. PATON, the President, in the chair.

Treasurer's Report.

DR. W. TRETHOWAN, the Honorary Treasurer, read his report and presented the balance sheet for the year ended December 31, 1922. The balance sheet is printed below. He pointed out that the affairs of the Branch were very satisfactory.

The report and balance sheet were received and adopted on the motion of DR. TRETHOWAN, seconded by DR. W. P. SEED.

President's Address and the Report of Council.

DR. PATON read the following address, which incorporates the Annual Report of the Council. The report is as follows:

REPORT OF THE COUNCIL.

In presenting to you the report of the Council for the year 1922-1923, it is satisfactory to note that the Branch's work in looking after the interests of the profession in the State is widely appreciated, as evidenced by the fact that 79% of the medical men practising here are members of the Branch, the actual figures being 163 out of a total of 205, an increase of twelve on the membership roll for last year.

The Council congratulates DR. WHITE, C.M.G., V.D., one of the ex-Presidents, on his promotion on retirement to the rank of Major-General, of which honour from his past record of military services he will prove himself a worthy recipient.

It is with great regret that it records the death of one member, DR. GEORGE JOHNSTONE CAMPBELL, who owing to ill-health resigned in 1921. He was an esteemed member of the Branch for many years.

Council Meetings.

During the year the Council held seven meetings, with an average attendance of six. The Ethical Committee met four times, when special cases were dealt with.

General Meetings.

There were eleven general meetings, with an average of twenty-three attending. The high average of attendances had more than once suggested the probability of the Branch requiring a larger room in the near future and now that the incorporation of overseas Branches is accomplished, it may be possible to consider the advisability of acquiring premises where not only meetings may be held, but a journal room opened and a nucleus of a library in this or other ways established.

The last general Annual Meeting, through the continued kindness of Dr. Anderson, was held as for several years in succession at the Claremont Hospital for the Insane and the Council gladly takes the opportunity of placing once more on its records its appreciation of his hospitality to the members of the Branch.

During the year one meeting was held at the Children's Hospital, but all others have been held at the Perth Hospital. Interesting papers were read by DRS. J. T. ANDERSON, SHEARMAN, PAGET, COUCH, DALE, NYULASY, MACKENZIE, STEWART and THURSTON and these were fully appreciated by the members. Clinical cases were shown at these various meetings. The Council desires to thank heartily all who have so generously contributed to the success of the professional work of the year.

Annual Dinner.

The fourth annual dinner was held on December 20, 1922, at the Palace Hotel. There were forty present and in addition to the members two guests, His Grace the Archbishop of Perth and the Colonial Secretary. The Council hopes that the presence of distinguished guests at the

WESTERN AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Statement of Receipts and Expenditure for the Year Ended December 31, 1922.

RECEIPTS.

	£ s. d.	£ s. d.
Interest Received—		
On Bonds and Stock	21 13 1	
On F.D.R.	11 4 11	
		32 18 0
Refund from Federal Council		38 11 9
Subscriptions and Capitalization Fees		551 15 6
Funds as on December 31, 1921—		
War Loan Bonds	£400 17 0	
F.D.R., W.A. Bank	325 0 0	
Current Account	177 12 6	
		903 9 6
		£1,526 14 9

EXPENDITURE.

	£ s. d.	£ s. d.
London Office		190 10 4
THE MEDICAL JOURNAL OF AUSTRALIA		163 0 0
Federal Council		15 0 0
Sundry Accounts—		
Printing	£14 2 6	
Postage	30 15 5	
Telephone	1 0 0	
Stationery	3 16 0	
Assistant Secretary	50 0 0	
Attendant	2 2 0	
Rent	2 2 0	
Commission	0 1 0	
		103 18 11
Funds as on December 31, 1922—		
War Loan Bonds	400 17 0	
W.A. Government Stock	200 0 0	
F.D.R., W.A. Bank	325 0 0	
Current Account	128 8 6	
		1,054 5 6
		£1,526 14 9

Audited and found correct,

ALLEN E. RANDELL.
M. KASNER MOSS.

February 13, 1923.

WM. TRETHOWAN,
Honorary Treasurer.

annual dinner will lend to it an added interest and benefit the Branch by its increased intercourse with public men of the State.

Model Timber Mill Agreement.

A model timber mill agreement has been drawn up during the year and after a careful consideration by the Council of the interests of the medical men engaged in timber mills practice and of the employees, it is hoped it will work beneficially to both.

Friendly Society Lodge Practice.

Our cordial relations with the Minister for Public Health are evidenced by his reference to the Branch for an expression of its views on a proposal laid before him by a deputation from the friendly societies asking that an acceptance of lodge members by subsidized Government medical officers should be made a condition precedent to the pay of the subsidy and by his friendly reception of the deputation from the Branch urging the advisability of the representation of the honorary medical staff on the Board of Management of the Perth Hospital after a refusal to receive a deputation direct from the staff. In consequence of the interview DR. MERRYWEATHER was first appointed to the Board as a representative of the Branch, but on the principle underlying the deputation's request being again laid before the Minster, Dr. Merryweather was re-appointed as a direct representative of the honorary staff.

Hospital Bill.

As you are aware, the recent *Hospital Bill*, which has been rejected by the Upper House, was fully considered by this Council and recommended to the Branch for its support as a fair and equitable Bill from the point of view of the profession, embodying the principles contained in the basic motions passed by the Branch at the special meeting called to consider the unsatisfactory *Hospital Bill* of the previous year.

Deep X-Ray Therapy.

In view of the present discussion going on in the press over the value of deep X-ray therapy, it may be noted that the Council has been seeking for some months to obtain fuller information from the Röntgenological societies in London and New York and it hopes that the replies will show that its successes are such as to justify the recommendation of the installation of a plant in Western Australia. During the year the Council has sought to obtain adequate recognition of the pioneer work of MR. W. J. HANCOCK, late Honorary Radiographer to the Perth Hospital, in the application of Röntgen rays to medical work, which unfortunately resulted in serious disabilities to himself. The Council has been in communication with the Premier, before whom, on request, a record of the services has been placed and it is hoped a favourable reply will be received.

Australasian Medical Congress (British Medical Association).

The first meeting of the Australasian Medical Congress, under the auspices of the British Medical Association, will be held in Melbourne in November. DR. MCWHAE was appointed Local Secretary and circulars giving full particulars have been circulated to all members. It is hoped that as many as possible will attend.

We have been advised by the General Secretary that the cable has been received from SIR WILLIAM MACEWEN, the President of the British Medical Association, who will travel to Melbourne to represent officially the mother Association at the Congress. We are waiting advice of the steamer he is due to arrive by at Fremantle and it is hoped time may permit of hospitality being shown to him while in Western Australia, in appreciation of the compliment the Association is paying to the overseas Branch.

After having read the report, Dr. Paton continued with his address (see page 487).

Election of Office-Bearers.

THE PRESIDENT then announced the result of the election of office-bearers and members of the Council:

President: DR. D. M. MCWHAE, C.M.G., C.B.E..

Ex-President: DR. D. D. PATON.

Vice-President: DR. D. P. CLEMENT.

Honorary Treasurer: DR. W. TRETHOWAN.

Honorary Secretary: DR. T. L. ANDERSON, O.B.E..

Members of the Council: DR. G. W. BARBER, C.B., C.M.G., D.S.O., DR. R. C. E. ATKINSON, DR. A. H. GIBSON.

Members of the Ethical Committee: DR. H. B. GILL, DR. G. W. BARKER, DR. W. H. NELSON.

It was stated that through an oversight there was no indication on the ballot paper of the number of members to be elected to the Ethical Committee. As a result twenty-seven out of eighty-two papers were informal.

DR. J. T. ANDERSON moved and DR. G. W. BARBER seconded a motion to the effect that the result of the poll be received and adopted. The motion was carried.

DR. G. W. BARBER moved and DR. J. J. HOLLAND seconded that DR. M. K. MOSS and DR. A. E. RANDELL be elected Honorary Auditors. The motion was carried.

Cerebellar Tumour.

DR. D. M. MCWHAE reported that a patient who had been exhibited at the meeting in November, 1922, had been admitted to hospital in a comatose condition and had died. A *post mortem* examination had been performed and it had been found that a tumour of the cerebellum had been present.

Aneurysm of the Abdominal Aorta as a Basis for Delusions.

DR. J. BOSTOCK AND DR. R. FITZROY JARRETT read notes of a patient who had been in the Hospital for the Insane for over four years with delusional insanity and exhibited a specimen of an abdominal aneurysm recovered at autopsy (see page 498).

Suggestion.

DR. J. BOSTOCK read a paper on "Suggestion" and presented a series of patients (see page 488).

THE PRESIDENT thanked Dr. Bostock for his interesting and able paper. He expressed astonishment at the improvement he had noticed in some of the patients.

Annual Meeting of the British Medical Association.

THE HONORARY SECRETARY read a letter from the President-Elect of the British Medical Association, extending a cordial invitation to members of the Branch to attend the forthcoming Annual Meeting of the Association at Portsmouth from July 20 to July 28, 1923.

Dental Clinics.

THE HONORARY SECRETARY read a letter from the Honorary Secretary of the Western Australian Odontological Society in reference to the provision of a public dental clinic for persons unable to pay for dental treatment elsewhere.

DR. R. H. M. JULL referred to the need for the establishment of a dental clinic where school children could receive efficient treatment. She had recognized this necessity in the course of her medical inspection of the school children. She maintained that the State was lagging behind other countries in this respect. She moved that the Government be asked to provide without loss of time a dental clinic with one whole-time salaried dentist and the necessary number of part-time assistants to carry out the work in an adequate manner.

The motion was seconded by DR. W. J. BEVERIDGE, who said that in his experience the worst case of dental caries were to be seen in persons living in the country districts.

DR. W. P. SEED was opposed to the clinic being available to all. He considered that the clinic should be reserved for those unable to pay.

DR. J. T. ANDERSON stated that he had advertised for a dentist for two and a half years. The salary of £384 had been offered to a single man. Only eight applications had been received.

DR. H. J. GRAY held the opinion that only the poor should receive treatment at the clinic.

DR. SEED moved as an amendment that treatment should be given only to those unable to pay. The amendment was seconded by DR. GRAY. The amendment was carried.

DR. J. DALE, O.B.E., moved that the Branch urge the Government to recognize the necessity of providing adequate facilities for dental treatment for those unable to pay in towns and of providing travelling dental clinics in country districts. The motion was seconded by DR. J. E. F. STEWART, who thought that the local boards of health should contribute to the cost of the travelling clinics. He suggested that the boards should be asked to make provision to meet the cost. The motion was carried.

DR. W. TRETHOWAN moved that in the reply to the Odontological Society the suggestion should be made that the Society approach the hospital boards and offer to staff dental departments at the various public hospitals. This motion was seconded by DR. F. A. HADLEY, who wished that the work already carried out by the Western Australian Odontological Society should be appreciated.

NOMINATIONS AND ELECTIONS.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

CAMPBELL, REID INNES, M.B., Ch.M., 1923 (Univ. Sydney), "Post Office House," Woollahra.
KENNEDY, ARTHUR JAMES, M.B., Mast. Surg., 1923 (Univ. Sydney), "Carnlough," Shaftesbury Road, Eastwood.
LOCKE, KEITH MORGAN, M.B., Ch.M., 1922 (Univ. Sydney), 69, Boyce Street, Glebe Point.
MAGNUS, ALEXANDER NOËL, M.B., 1923 (Univ. Sydney), c.o. Dr. E. R. Magnus, 175, Macquarie Street, Sydney.

THE undermentioned have been elected members of the South Australian Branch of the British Medical Association:

CLARKE, ANNIE WINIFRED, M.B., B.S., 1922 (Univ. Adelaide), Adelaide Hospital, Adelaide.
JONES, ALAN BRITTEN, M.B., B.S., 1921 (Univ. Adelaide), Children's Hospital, North Adelaide.
LINDON, LEONARD CHARLES EDWARD, M.B., B.S. (Univ. Adelaide), F.R.C.S., 171, North Terrace, Adelaide.
McLAUGHLIN, EUGENE, M.B., B.S., 1922 (Univ. Adelaide), Adelaide Hospital, Adelaide.
WEST, ESMOND FRANK, M.B., B.S., 1922 (Univ. Adelaide), Adelaide Hospital, Adelaide.

NOTICES.

THE COUNCIL OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION has arranged the following provisional programme of the Branch meetings. The Scientific Committee reserves to itself the right to modify the arrangement, but it is hoped that no changes will be necessary.

June 6, 1923.

CLINICAL MEETING at the Melbourne Hospital.

July 4, 1923.

At the Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne Hospital, at 8.15 p.m..

MR. W. KENT HUGHES: "Small Defects that Cause Serious Foot Disability and Their Treatment: Corns, Bunions, *Hallux Valgus*, Hammer-Toe, Weak Ankles, Flat Foot, including Metatarsalgia."

August 1, 1923.

CLINICAL MEETING at the Alfred Hospital.

Medical Societies.

THE MEDICAL SCIENCES CLUB OF SOUTH AUSTRALIA.

A MEETING OF THE MEDICAL SCIENCES CLUB OF SOUTH AUSTRALIA was held at the Adelaide University, Adelaide, on December 1, 1922.

Radiograph of Kidneys.

DR. H. C. NOTT exhibited a radiograph showing both kidneys simultaneously. The right kidney was seen to be much deformed, contracted and nodular. It had undergone diffuse calcification. The left kidney which was clearly defined, was seen to be hypertrophied but otherwise normal. Dr. Nott expressed the opinion that the deformed kidney was probably tuberculous, as this was the commonest cause of diffuse calcification. He pointed out that similar calcification occurred in the site of old hydatid infections, in old hæmatomata and in some tumours. It also occurred as a result of simple injury.

DR. A. A. LENDON asked what evidence was available to justify the conclusion that the degree of deformation was too great to be accounted for by calculi.

DR. NOTT in reply stated that the calcification was not sufficiently outlined to support such a view. Even scattered calculi were generally rounded and well defined. The radiograph exhibited had been taken from a woman, twenty-seven years of age, who had experienced no pain or urinary symptoms until three months previously. At this time she had passed blood. At the present time the only symptoms were frequency of micturition and irritation of the urethra. The patient had some old tuberculous glands in the neck and there was no calculus in the urethra.

DR. D. L. BARLOW stated that while performing *post mortem* examinations he had seen one or two instances in which one huge calculus had formed and all that had remained of the kidney had been a shell of fibrous tissue.

Lympho-Sarcoma in Mice.

PROFESSOR T. BRAILSFORD ROBERTSON exhibited specimens of a peculiar type of tumour occurring in mice. Professor Robertson said that it was characterized by generalized hyperplasia of lymphoid tissue throughout the body. It had first been described by Haaland in 1905. Haaland had seen six instances. Tyzzer in 1907 had described a similar instance and four had been described by Murray in the third scientific report of the investigations of the Imperial Cancer Research Fund in 1908. Among the numerous animals examined by these authors, not more than eleven instances of these tumours had occurred.

Robertson and Ray had undertaken a course of experiments in California and Toronto from the year 1914 to 1919 on the influence of various additions to the diet upon growth and longevity in mice. They had found that instead of being rare this type of tumour was of frequent occurrence. It had been present in about 20% of male animals and in about 25% to 30% of female animals. They had described it provisionally as lympho-sarcoma. Murray had called it lymph-adenoma or malignant lymphoma. A number of specimens which had been found in the Californian stock of mice, had been examined at that time by Dr. H. C. Bailey. Dr. Bailey had confirmed the tumour as being identical with that described by Haaland and Murray.

In the course of all the experiments no influence of dietary additions upon the occurrence of this tumour had been discovered, excepting in the case of those animals which had received a large dosage of cholesterol daily (forty milligrammes). In these animals the incidence of the tumour had been extremely low. Among thirty-six males only one animal developed it and among a like number of female only four. Whether this low incidence was accidental or was really due to the administration of these large dosages of cholesterol could not as yet be positively affirmed.

The extraordinary frequency of this tumour in the stock of animals employed in these experiments, when contrasted with the comparative rarity of reports of its occur-

rence elsewhere, roused the suspicion that this high incidence might be due to some peculiar condition attaching to this stock of animals. At first glance a likely supposition would be that the tumour was inbred in the strain, since Slye had shown that liability to tumour incidence is hereditary. This possibility appeared to be ruled out, however, by the fact that the tumour had begun to appear quite frequently among the entirely fresh stock of animals which were being employed for similar experiments in Adelaide. This stock arose from four individuals originally procured in Sydney and could not reasonably be supposed to be related genetically to the stock employed in California.

Another possibility that suggested itself was that the diet employed both in Adelaide and in California might be unusual and particularly favourable for the incidence of this tumour. That appeared unlikely, because the dietary employed in Adelaide consisted of a basal ration of rice boiled in milk, supplemented by maize and a small allowance of egg daily. The dietary employed in California consisted of a basal ration of rolled oats, supplemented by dried bread and the same small allowance of egg. The only common feature of the two diets was the administration of mixed yolk and white of egg to the amount of about one cubic centimetre daily. It was hardly credible that this should be responsible for the frequent occurrence of this tumour. A more likely supposition than either of these was that the tumour had been discovered in the course of these experiments to be of quite common occurrence simply because the hygienic precautions which surrounded the animals, enabled a large proportion of them to attain the age of two years or over, whereas in the majority of laboratories the animals were not kept under conditions which permitted the frequent attainment of that age. The average age of incidence of lympho-sarcoma was between seven hundred and seven hundred and fifty days after birth. In the animals which Professor Robertson had under observation the tumour was occurring at a somewhat earlier age; but this appeared to be associated with a general tendency of the Adelaide stock of mice to a lower longevity and earlier development of senescence than the American stock.

The specimens exhibited comprised sections from the most remarkable instance which had been encountered in California. In this animal the skin had been greatly thickened and had had an œdematous appearance occasioned by a thick layer of lymphocytes which it had contained. The spleen had been greatly enlarged, as it usually was in these instances. Growths had been present in the lymphatic glands in the neck, axillæ and groin, in the mesentery and in the hilus of the kidney. These were usual situations for this type of growth. The unusual feature in this particular animal consisted in the invasion of the skin and also of the thyreoid, in which almost the whole of the normal thyreoid tissue had been replaced by a closely packed mass of lymph cells. A nodule of lymph cells had been clearly defined in the brain and, as Professor Cleland had pointed out in examining the sections earlier in the day, the small capillaries in the brain could be seen to be crowded with lymph cells in great excess over the red cells. In some instances the blood vessels were completely blocked by them and this had doubtless given rise to the nodule observed.

Another specimen exhibited had originated in the local stock of mice. It was that of a female mouse, aged six hundred and twenty-eight days, with a spleen no less than four centimetres long by one and a quarter centimetres broad. A large growth was present on the left side of the neck and a smaller one on the right, the two compressing the thyreoid gland between them. There was no sign of invasion of the thyreoid. There was a large growth in the hilus of the left kidney and the thymus, as usual in these animals, appeared to be persistent.

Blood films had been taken from animals in which this type of tumour had occurred by Dr. C. H. Bailey in California, but Professor Robertson was not in possession of any reports concerning them.

DR. BULL pointed out that the growth was not to any great extent invasive. In one of the instances reported by Murray the lung had been invaded and in one of the sections shown the thyreoid had been invaded, but otherwise there had been little evidence of invasive activity. The sections shown did not exhibit mitoses, whereas the section of the brain showed every capillary and the larger vessels packed with lymphocytes. The condition therefore appeared to resemble a lymphatic hyperplasia. Such conditions might occur without any leuchæmic picture in the blood. Patients had recently been examined by him in which the leuchæmic picture had not developed until just before death. Dr. Bull pointed out that lympho-sarcoma possessed local destructive capacity and the power to form true metastases in distant organs. The tumours arose in a chain of lymphatic glands or in a localized lymphatic structure. They grew rapidly and invaded the capsule of the gland and surrounding tissues. Extension in the early stages appeared to be exclusively by way of the lymphatics, but when the condition was advanced true metastatic growths might occur in lungs, brain, kidneys *et cetera*. There were said to be two specific forms of the tumour, namely, where the affected cell is the reticulum cell of the germ centre and where it is the lymphocyte, the tumours being called large round-celled lympho-sarcoma and malignant lympho-cytoma respectively. Distinctions between lympho-sarcoma and leuchæmia could not always be sharply drawn. In a certain number there was an admixture of plasma cells, eosinophile cells and normal lymphocytes, presenting the features of an infectious granuloma.

The term leuco-sarcoma had been used to designate a group characterized by a leuchæmic blood picture and an invasive lymphoid tumour. In lymphatic leuchæmia generalized lymphatic hyperplasia was present. The blood picture might be definitely leuchæmic, might show very slight increase in lymphocytes or might show no leuchæmic change at all. Sometimes the leuchæmic blood picture did not develope until very late in the disease. There was usually present lymphoid infiltration of the parenchymatous organs, but the hyperplasia in the lymphatic glands was limited. It appeared that in the leuchæmia group some instances closely resembled certain types of lympho-sarcoma, while others approached leuco-sarcoma.

Dr. Bull referred to the work of Webster, who had concluded that it was probable that lympho-sarcoma, lymphatic leuchæmia and leuco-sarcoma were different manifestations of the same disease. Webster had suggested that the term "lymph-adneosis, leuchæmic or aleuchæmic," would express this idea and would simplify the classification until a definite ætiological agent was found. He believed, further, that the disease was not a neoplasm, but a direct response on the part of lymphocytes to a chemotactic influence exerted by the disease-causing agent.

Dr. Bull further drew attention to the occasional occurrence of what was known as glandular fever, which was quite impossible to differentiate from leuchæmia except by the fact that the patient generally recovered.

DR. H. MAYO pointed out that a condition of glandular fever might run for as long as six weeks.

DR. BULL stated that in one instance he had examined blood films for some months. Initially the blood picture had been that of leuchæmia. The patient had recovered, but it was many months before the blood picture had become normal. There were various manifestations of lymphatic hyperplasia and excluding Hodgkin's disease and typical lympho-sarcoma there was a group about which little was known. The tumours exhibited appeared to resemble leuchæmia. The occurrence of splenomegaly and of growths in the hilus of the kidney united in suggesting lymphatic leuchæmia, since the hilus of the kidney specially would be a most unlikely locality for true metastases to occur. The fact that Murray and Haaland had both reported the tumour to be non-transferable added definite support to this view.

Obituary.

JOHN HARRIS.

IT is with great regret that we announce the death of Dr. John Harris, at Church Street, Newcastle, on April 7, 1923.

Naval and Military.

APPOINTMENTS.

THE following retirements, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Nos. 19, 25 and 27, of March 15, April 12 and April 19, 1923, respectively:

Australian Military Forces.

SECOND MILITARY DISTRICT.

Australian Army Medical Corps Reserve.

HONORARY MAJORS R. T. PATON and C. PURSER and HONORARY CAPTAINS W. A. KELLY, W. J. MORTON and E. G. BLAXLAND are retired under the provisions of Australian Military Regulation 152 (1), 31st December, 1922.

HONORARY CAPTAIN J. C. ROSS is transferred to the Australian Army Medical Corps Reserve, Third Military District, 1st April, 1923.

Reserve of Officers.

CAPTAIN R. P. RUNDLE is transferred to the Reserve of Officers, Third Military District, 1st March, 1923.

THIRD MILITARY DISTRICT.

Australian Army Medical Corps.

MAJOR (HONORARY LIEUTENANT-COLONEL) J. C. MORTON is transferred to the Reserve of Officers, 30th March, 1921. (This amends the notification respecting this officer which appeared in Executive Minute No. 156/1921, promulgated in *Commonwealth of Australia Gazette*, No. 38, dated 28th April, 1921.)

To be Captains—CAPTAINS W. I. HAYES and E. I. LITTLEJOHN, from the Reserve of Officers, 8th March, 1923.

To be Captain (provisionally)—HARRY LAWRENCE STOKES, 8th March, 1923.

To be Lieutenants (provisionally)—WILLIAM POOK and HERBERT GIBLIN FURNELL, 8th March, 1923.

MAJOR (HONORARY LIEUTENANT-COLONEL) A. M. WILSON, D.S.O., is appointed to command the Second Field Ambulance, 7th March, 1923.

MAJOR W. B. CRAIG, D.S.O., relinquishes the command of the Second Field Ambulance, 6th March, 1923, and is transferred to the Reserve of Officers, 7th March, 1923.

MAJOR D. C. PIGDON is transferred to the Reserve of Officers, 1st April, 1923.

To be Captain (provisionally)—DAVID LESLIE YOFFA, with regimental seniority next after CAPTAIN C. R. MERRILLEES, 1st July, 1922.

THE provisional rank of Lieutenant granted to DAVID LESLIE YOFFA is terminated, 30th June, 1922.

CAPTAINS H. B. LEE, D.S.O., M.C., and I. BLAUBAUM are transferred to the Reserve of Officers and to be Majors, 2nd January, 1923, and 24th March, 1923, respectively.

Australian Army Medical Corps Reserve.

HONORARY CAPTAIN T. H. STRANGMAN is placed on the Retired List with the rank of Captain and with permission to wear the prescribed uniform, 30th March, 1923.

HONORARY MAJOR E. L. GAULT is retired under the provisions of Australian Military Regulation 152 (1), 1st April, 1923.

HONORARY CAPTAIN J. C. ROSS is transferred from the Australian Army Medical Corps Reserve, Second Military District, 1st April, 1923.

Reserve of Officers.

CAPTAIN R. P. RUNDLE is transferred from the Reserve of Officers, Second Military District, 1st March, 1923.

CAPTAIN L. W. JOHNSTON is transferred from the Reserve of Officers, Fifth Military District, 1st April, 1923.

THE undermentioned officers are placed on the Retired List with the ranks stated and with permission to wear the prescribed uniform, 1st January, 1923:

Major—MAJOR W. W. HOPE.
Captain—CAPTAIN R. L. MORTON.

Awards of the Colonial Auxiliary Forces Officers' Decoration.

Reserve of Officers.—MAJOR (HONORARY LIEUTENANT-COLONEL) J. C. MORTON and CAPTAIN F. J. PACEY.

FOURTH MILITARY DISTRICT.

Australian Army Medical Corps Reserve.

HONORARY CAPTAIN C. N. MACQUARIE is retired under the provisions of Australian Military Regulation 152 (1), 31st December, 1922.

Unattached List.

MAJOR F. GOLDSMITH is placed on the Retired List with permission to retain his rank and wear the prescribed uniform, 1st January, 1923.

FIFTH MILITARY DISTRICT.

Reserve of Officers.

CAPTAIN L. W. JOHNSTON is transferred to the Reserve of Officers, Third Military District, 1st April, 1923.

SIXTH MILITARY DISTRICT.

Australian Army Medical Corps Reserve.

HONORARY CAPTAIN R. G. SCOTT is retired under the provisions of Australian Military Regulation 152 (1), 23rd April, 1923.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

AT an adjourned meeting of the Senate of the University of Sydney held on April 23, 1923, the following appointments were made: BRIGADIER-GENERAL MACKAY as Student Adviser for 1923; DR. F. A. MAGUIRE as Lecturer in Anatomy.

A letter was received from the General Secretary for Australia of the Rhodes Trustees, intimating that the selection of DR. R. L. RAYMOND as Rhodes Scholar has been confirmed.

On the unanimous recommendation of the Selection Committee in England, ACTING PROFESSOR O. U. VONWILLER was by unanimous resolution of the Senate appointed to the Chair of Physics.

An application from the Honorary Secretary of the Australian National Research Council, asking for permission to use the necessary rooms at the University from August 23 to September 3, 1923, for the purpose of holding the Pan-Pacific Science Congress, was granted.

The following were elected as University representatives to a joint committee in connexion with the Pan-Pacific Congress:

Faculty of Medicine: THE DEAN (PROFESSOR MILLS), PROFESSOR CHAPMAN, PROFESSOR HUNTER, ASSOCIATE PROFESSOR PRIESTLEY.

Faculty of Science: THE DEAN (PROFESSOR DAVID), PROFESSOR COOKE, PROFESSOR LAWSON, PROFESSOR HARRISON, ASSOCIATE PROFESSOR TAYLOR, PROFESSOR VONWILLER.

Faculty of Engineering: PROFESSOR MADSEN, MR. T. F. FURBER.

Faculty of Veterinary Science: THE DEAN (PROFESSOR STEWART), DR. S. DODD, MR. R. M. C. GUNN.

Faculty of Agriculture: THE DEAN (PROFESSOR WATT), MR. W. L. WATERHOUSE, MR. G. WRIGHT.

On the recommendation of the Faculty of Science—

1. The following examiners were appointed for the conduct of the D.Sc. Examination:

Physics: SIR THOMAS LYLE, University of Melbourne; PROFESSOR W. KERR GRANT, University of Adelaide; PROFESSOR VONWILLER.

Chemistry: PROFESSOR STEELE, University of Queensland; PROFESSOR RIVETT, University of Melbourne; PROFESSOR FAWSITT.

2. The John Coutts Scholarship was awarded to MR. FRANCIS LIONS.

The Senate announced the awards of the following Scholarships: Walter and Eliza Hall Research Fellowship to

H. J. HYNES; Dr. John Osborne Scholarship to MR. K. G. LAWRANCE.

The Senate has decided to hold the Deferred Examinations in Anatomy, Physiology and Pharmacology for all students one week earlier than the beginning of Lent Term commencing in 1924.

Correspondence.

THE USE OF THE TOOTH BRUSH.

SIR: My attention has been drawn to the recent correspondence in your journal touching the use of the tooth brush by Drs. Triado and Arthur.

Both agree that a stiff bristle tooth brush is dangerous and Dr. Arthur denounces the dentist who recommends good stiff bristles as an unscrupulous pyorrhœa specialist.

Having practised exclusively the treatment of *pyorrhœa alveolaris* for many years. I venture to hope my opinion on this subject may be acceptable to your readers.

No bristle tooth brush is of any real value unless it be fairly stiff, because the saponaceous dentifrice necessary for the emulsification of the dental film breaks down its resistance enormously.

Dr. Triado's condemnation of the tooth brush because of its danger to the gums and to the necks of the teeth, has been and is being verified by clinical evidence from day to day in my practice. It is almost inconceivable that such a dangerous means for cleansing the teeth should have been in vogue for upwards of two hundred years.

Each hollow birstle becomes an incubator for bacteria, travelling through the oral cavity to enter; and in this safe retreat to increase and gain a specific virulence. Unfortunately the teeth and gums are so correlated that it is practically impossible when using the tooth brush to differentiate, so the extremes, hard calcified enamel and tender and oftentimes spongy gums, have to submit to the same treatment. Oral hygiene must aim at a means whereby the gums may be stimulated by massage and infection prevented by the thickening of the corneous layer of the mucous membrane and also with which the teeth may be polished and not scratched, as with the bristles of a tooth brush.

Yours, etc.,

R. MORSE WITHYCOMBE.

"Wyoming," 175, Macquarie Street,
Sydney.

A PERSONAL MATTER.

SIR: In your issue of April 21, 1923, my name appears with the letters D.S.O. after it.

This honour I cannot claim and, as I was unaware of the paragraph until I saw it in THE MEDICAL JOURNAL OF AUSTRALIA, I ask you to print this letter in your next issue, otherwise you leave me in a false light for which I am in no sense responsible.

Yours, etc.,

C. DUGUID.

192, North Terrace, Adelaide,
April 25, 1923.

Births, Marriages and Deaths.

THE charge for inserting advertisements of Births, Marriages and Deaths is 5s., which sum should be forwarded in money orders or stamps with the notice, not later than the first post on Tuesday, in order to insure insertion in the current issue.

DEATH.

SAMUELSON.—On April 23, 1923, of enteric fever, at Sydney, Forrester, the wife of Gerald S. Samuelson, M.D. (late Major, Royal Army Medical Corps), of the Department of Public Works, Avon Dam.

Proceedings of the Australian Medical Boards.

NEW SOUTH WALES.

THE undermentioned has been registered under the provisions of the *Medical Act, 1912 and 1915*, as a duly qualified medical practitioner:

WALL, JAMES AUGUSTUS, M.B., Bac. Surg., 1918 (Univ. Melbourne).

QUEENSLAND.

THE undermentioned have been registered under the provisions of the *Medical Act of 1867* as duly qualified medical practitioners:

HARRIS, THOMAS ALEXANDER BRITTEN, M.B., B.S., 1922 (Univ. Melbourne), Ipswich Hospital.

PATERSON, NORMAN ROY, M.B., 1921 (Univ. Sydney), Burketown.

REID, JAMES SCOTT, M.B., Ch.M., 1923 (Univ. Sydney), Charters Towers Hospital.

VICTORIA.

THE following names have been restored to the Register:

GOULD, ELVEN COLMAN.
KELLY, JAMES PATRICK.
MATTEI, CHARLES.
MCGLYNN, JAMES.

Name of deceased practitioner removed from the Register:

CORRY, ALEXANDER.

Books Received.

ANÆMIA: ITS CAUSES AND MODERN TREATMENT, by Arthur W. Fuller, M.D. (Edin.); 1923. London: H. K. Lewis & Company, Limited; Crown 8vo., pp. 64. Price: 3s. 6d. net.

LABORATORY STUDIES IN TROPICAL MEDICINE, by C. W. Daniels, M.B. (Camb.), F.R.C.P. (Lond.), and H. B. Newham, C.M.G., M.D. (Durh.), M.R.C.P. (Lond.), D.P.H. (Camb.), D.T.M. & H. (Camb.); Fifth Edition, Thoroughly Revised; 1923. London: John Bale, Sons & Danielsson, Limited; Demy 8vo., pp. xiii. + 550, with index, seven coloured plates and 134 illustrations. Price: 25s. net.

MONOGRAPHS ON PHYSIOLOGY: THE VASO-MOTOR SYSTEM, by Sir William M. Bayliss, M.A., D.Sc., LL.D., F.R.S.; 1923. London: Longmans, Green & Company; Demy 8vo., pp. 163, with 67 figures. Price: 7s. 6d. net.

POST MORTEM: ESSAYS, HISTORICAL AND MEDICAL, by C. MacLaurin, M.B., C.M., F.R.C.S.E., LL.D.; 1923. London: Jonathan Cape; Sydney: Angus & Robertson, Limited; Crown 8vo., pp. 255. Price: 7s. 6d. net.

TEXT-BOOK OF ANATOMY AND PHYSIOLOGY FOR TRAINING SCHOOLS AND OTHER EDUCATIONAL INSTITUTIONS, by Elizabeth R. Bundy, M.D.; Fifth Edition, revised and enlarged by Martha Tracy, M.D., Dr. P. H. and Grace Watson, R.N.; 1923. Philadelphia: P. Blakiston's Son and Company; Demy 8vo., pp. xv. + 419. with a glossary and index and 266 illustrations, including forty-six coloured plates. Price: $2.50.

THE CHEMISTRY OF TUBERCULOSIS, by H. Gideon Wells, M.D., Ph.D., Lydia M. De Witt, M.D., A.M., and Esmond R. Long, Ph.D.; 1923. Baltimore: Williams & Wilkins Company; Demy 8vo., pp. vii. + 438 and index. Price: $5.50.

THE OFFICIAL HISTORY OF AUSTRALIA IN THE WAR OF 1914-1918: VOLUME VII., THE AUSTRALIAN IMPERIAL FORCE IN SINAI AND PALESTINE, 1914-1918, by H. S. Gullett; 1923. Sydney: Angus & Robertson, Limited; Demy 8vo., pp. xvi. + 793, with index, 77 maps and 83 illustrations. Price: 21s. net.

THE PRACTICE OF MEDICINE IN THE TROPICS, by Many Authorities; Edited by Lieutenant-Colonel W. Byam, O.B.E., and Major R. G. Archibald, D.S.O.; Volume III.; 1923. London: Henry Frowde and Hodder & Stoughton; Royal 8vo., pp. xx. + 865, with index of authorities, general index, thirty coloured plates and 347 figures in the text. Price: £4 4s. net.

VARIATIONS BIOCHIMIQUES DU RAPPORT NUCLÉO-PLASMATIQUE AU COURS DU DÉVELOPPEMENT EMBRYONNAIRE: RECHERCHES DE PHYSIOLOGIE GÉNÉRALE SUR LA DÉTERMINATION DE LA MASSE PROTOPLASMIQUE ACTIVE, par Éliane Le Breton et Georges Schaeffer, Strasbourg; 1923. Paris: Masson et Compagnie; Royal 8vo., paper cover, pp. 196, with 16 figures. Price: Frs. 15 net.

Medical Appointments.

DR. S. E. FRANCIS (B.M.A.) has been appointed Public Vaccinator for Ferntree Gully Shire, Victoria.

* * * *

DR. H. F. PERKINS (B.M.A.) has been appointed Government Medical Officer at Mareeba, Queensland.

* * * *

DR. H. M. NORTH (B.M.A.), Resident Medical Officer, Department of Mental Hospitals, New South Wales, has been appointed Senior Medical Officer in that Department.

* * * *

DR. K. ST. V. WELCH (B.M.A.) has been appointed on probation Medical Officer, Medical Branch of the Department of Education, New South Wales.

* * * *

THE following appointments have been made at the Royal Alexandra Hospital for Children, Camperdown, New South Wales: DR. G. R. HALLORAN (B.M.A.) as Honorary Assistant Ear, Nose and Throat Surgeon; DR. KEITH INGLIS (B.M.A.) as Honorary Assistant Pathologist.

* * * *

THE undermentioned appointments in the Chief Secretary's Department and Office of the Minister of Public Health have been promulgated in the *Government Gazette of New South Wales*, No. 45, of April 13, 1923: DR. W. H. COUTIE (B.M.A.), Medical Superintendent and Deputy Inspector-General of Mental Hospitals, as Emergency Medical Superintendent and Deputy Inspector-General of Mental Hospitals; DR. R. U. RUSSELL, Medical Superintendent and Visiting Medical Officer, Mental Hospitals, as Emergency Medical Superintendent and Visiting Medical Officer, Mental Hospitals; DR. J. A. L. WALLACE (B.M.A.), Senior Medical Officer, Mental Hospitals, as Medical Superintendent (First Class), Mental Hospitals; DR. B. M. SAMPSON, Senior Medical Officer, Mental Hospitals, as Medical Superintendent (Second Class), Mental Hospitals; DR. H. H. NOWLAND (B.M.A.), Senior Medical Officer, Mental Hospitals, as Medical Superintendent (Second Class), Mental Hospitals.

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THE undermentioned appointments have been made to the Honorary Medical Staff of the Perth Hospital for a term of three years to March 31, 1926: DR. A. J. NYULASY (B.M.A.) and DR. J. K. COUCH (B.M.A.) as Gynæcologists; DR. J. J. HOLLAND (B.M.A.) and DR. G. W. BARKER (B.M.A.) as Assistant Gynæcologists; DR. A. E. MARTIN as Consulting Ophthalmic Surgeon; DR. J. THOMPSON (B.M.A.) and DR. D. D. PATON (B.M.A.) as Ophthalmic Surgeons; DR. T. L. ANDERSON (B.M.A.) as Ear, Nose and Throat Surgeon; DR. J. CUTHBERT (B.M.A.) as Physician and Surgeon for Skin Diseases: DR. W. H. NELSON (B.M.A.) as Anæsthetist; DR. D. SMITH (B.M.A.) as Radiologist; DR. C. SHEARMAN (B.M.A.) as Pathologist and Bacteriologist; DR. M. O'CONNOR and DR. H. A. LESCHEN (B.M.A.) as Consulting Physicians; DR. R. C. MERRYWEATHER (B.M.A.), DR. D. P. CLEMENT (B.M.A.) and DR. D. M. MCWHAE, C.M.G., C.B.E. (B.M.A.), as Physicians; DR. W. H. NELSON (B.M.A.), DR. A. W. FARMER (B.M.A.) and DR. J. R. DONALDSON (B.M.A.) as Assistant Physicians; DR. L. ROBERTSON (B.M.A.) as Physician for Infectious Diseases; DR. T. H. LOVEGROVE, DR. A. J. H. SAW, O.B.E. (B.M.A.), DR. W. TRETHOWAN (B.M.A.) and DR. H. G. TYMMS (B.M.A.) as Consulting Surgeons; DR. L. T. GILLESPIE (B.M.A.), DR. T. AMBROSE (B.M.A.) and DR. F. A. HADLEY (B.M.A.) as Surgeons; DR. H. J. LOTZ (B.M.A.), DR. M. K. MOSS (B.M.A.) and DR. F. L. GILL (B.M.A.) as Assistant Surgeons.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xviii..

AUSTIN HOSPITAL, HEIDELBERG: Assistant Resident Medical Officer.

MELBOURNE HOSPITAL: Vacancies on the Honorary Medical Staff; also Resident Radiologist.

MOTHERCRAFT TRAINING SCHOOL, PETERSHAM, NEW SOUTH WALES: Assistant Honorary Medical Officer.

ROYAL PRINCE ALFRED HOSPITAL, SYDNEY: Vacancies on the Medical Staff.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C..

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney	Australian Natives' Association Ashfield and District Friendly Societies' Dispensary Balmain United Friendly Societies' Dispensary Friendly Society Lodges at Casino Leichhardt and Petersham Dispensary Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney Marrickville United Friendly Societies' Dispensary North Sydney United Friendly Societies People's Prudential Benefit Society Phœnix Mutual Provident Society
VICTORIA: Honorary Secretary, Medical Society Hall, East Melbourne	All Institutes or Medical Dispensaries Australian Prudential Association Proprietary, Limited Manchester Unity Independent Order of Oddfellows Mutual National Provident Club National Provident Association
QUEENSLAND: Honorary Secretary, B. M. A. Building, Adelaide Street, Brisbane	Brisbane United Friendly Society Institute Stannary Hills Hospital
SOUTH AUSTRALIA: Honorary Secretary, 12, North Terrace, Adelaide	Contract Practice Appointments at Renmark Contract Practice Appointments in South Australia
WESTERN AUSTRALIA: Honorary Secretary, Saint George's Terrace, Perth	All Contract Practice Appointments in Western Australia
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington	Friendly Society Lodges, Wellington, New Zealand

Diary for the Month.

MAY 8.—New South Wales Branch, B.M.A.: Ethics Committee.
MAY 9.—Western Australian Branch, B.M.A.: Council.
MAY 9.—Melbourne Pædiatric Society.
MAY 11.—New South Wales Branch, B.M.A.: Clinical Meeting.
MAY 11.—Queensland Branch, B.M.A.: Council.
MAY 11.—South Australian Branch, B.M.A.: Council.
MAY 15.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
MAY 15.—Illawarra Suburbs Medical Association, New South Wales.
MAY 16.—Western Australian Branch, B.M.A.: Branch.
MAY 17.—Victorian Branch, B.M.A.: Council; Election for Representative Body.
MAY 17.—City Medical Association, New South Wales.
MAY 22.—New South Wales Branch, B.M.A.: Medical Politics Committee; Organization and Science Committee.
MAY 24.—Brisbane Hospital for Sick Children: Clinical Meeting.
MAY 25.—New South Wales Branch, B.M.A.: Branch.
MAY 25.—Queensland Branch, B.M.A.: Council.
MAY 30.—Victorian Branch, B.M.A.: Council.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, B.M.A. Building, 30-34, Elizabeth Street, Sydney. (Telephone: B. 4635.)

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